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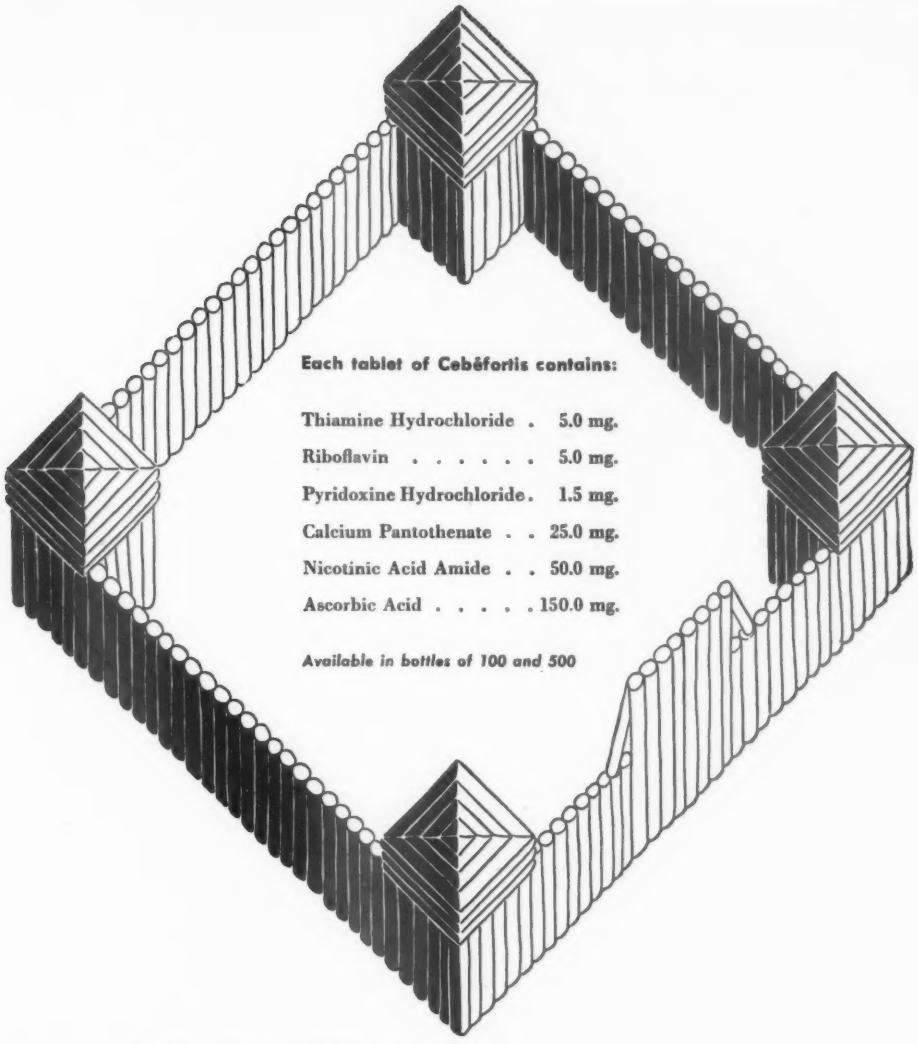
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ORIGINAL ARTICLES

The Use of Folic Acid in the Treatment of Macrocytic Anemias in Office Practice, *Marion N. Gibbons, M.D.* 2

Tropical Diseases in the Amazon Region of Brazil and What is Being Done to Control Them, *Maria Paumgartten Deane, M.D., M.P.H.* 7

The Use of Curare in General Anesthesia, *Lois L. Wells, M.D.* . . 15

Tropical Medicine, Part IX—Intestinal Protozoa (continued), *Carroll LaFleur Birch, M.D.* 17

FEATURES

Putnam Fellowship for Advanced Research 6

Dutch National Health Congress 6

Current Publications of Medical Women 19

Medical Calendar, *Carroll LaFleur Birch, M.D., and Alice Bartlett* 22

Book Reviews 24

Opportunities for Medical Women: The Student Health Service, *Florence Mahoney, M.D.* 26

Medical School News, *Eva F. Dodge, M.D.* 27

News of Medical Women, *Elizabeth Kittredge, M.D.* 28

ORGANIZATION

News from the Branches 31

Reservations for Annual Meeting 32

New Members 32

Directory . . . . . Among Front Advertisements

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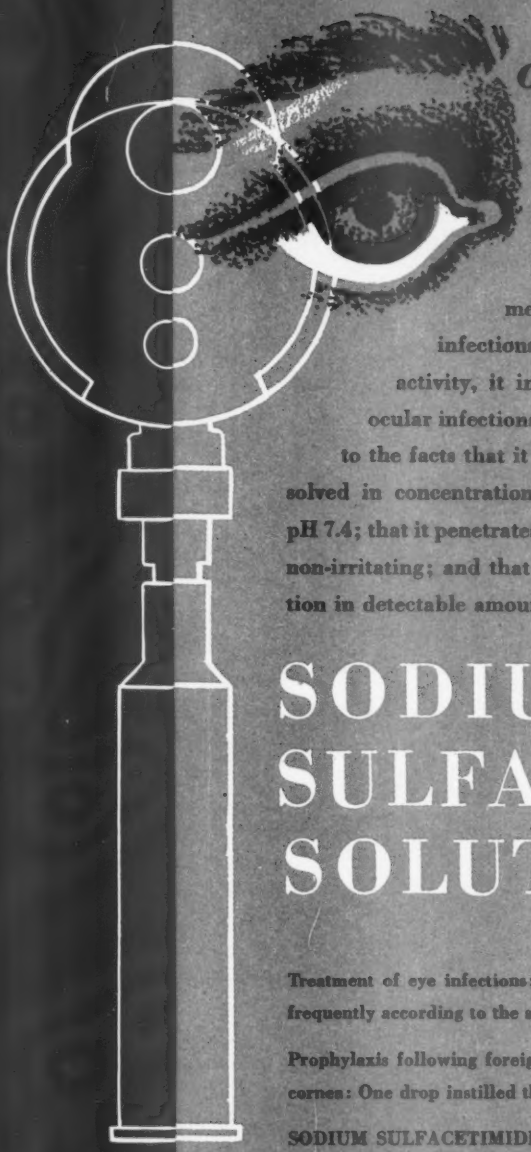

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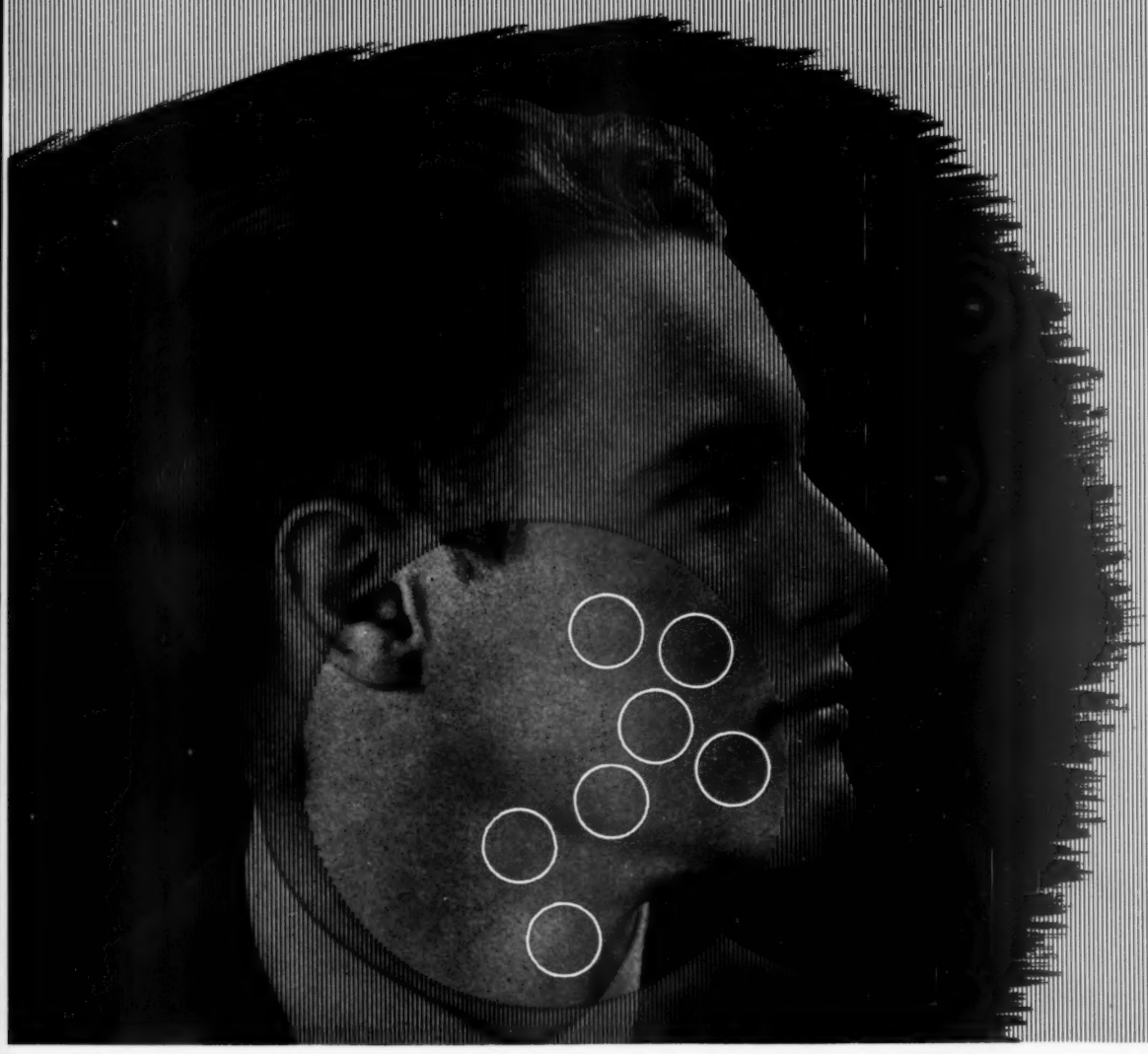

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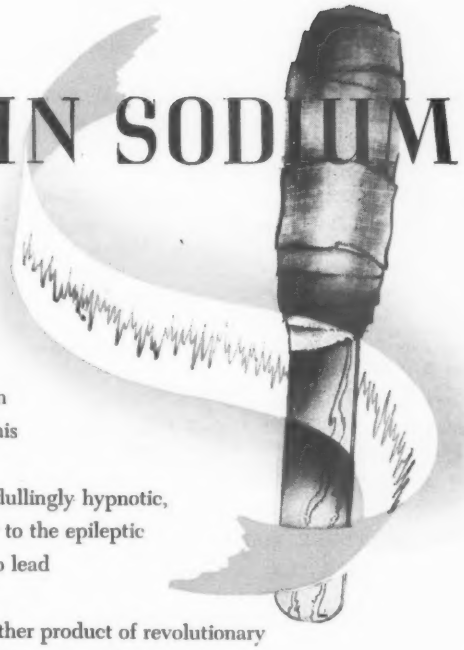

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(Continued on next page)

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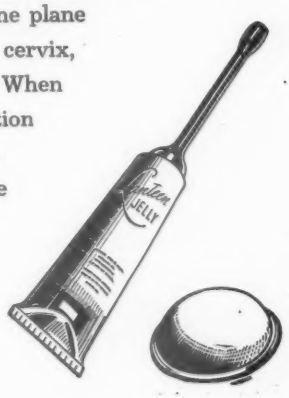

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EDITORIAL

With this issue of January 1947, the Journal begins its second volume, the first having closed with the December 1946 issue, so that the numbering hereafter may correspond to the calendar year—a boon to librarians, at least. It seems fitting at this time, therefore, to review briefly the happenings of the past year.

During these first nine months the Journal has had its vicissitudes and its bright spots. The International number in November was a high point, and for this our thanks must go to Dr. Lovejoy. The Chicago number in October was also a definite accomplishment. It is to be hoped that in the future other Branches will be inspired to follow the Chicago example, and to vie with one another to create the most interesting and satisfactory number. In this way we will build a publication of lasting merit.

The Journal's tragedy was the loss of our Associate Editor, Dr. Alice Stone Woolley, whose enthusiastic support has been one of its greatest assets. Whatever the Journal accomplishes in the future will be in large measure the result of her belief in the real value of the role it can play in the advancement of the work of medical women.

Two features during the year deserve special mention. The series of articles on Tropical Medicine, unfailingly supplied each month by Dr. Carroll LaFleur Birch, are of permanent interest and value, and indicate to all our members the possibilities of such a monthly contribution. The various articles and reports on the work of the American Women's Hospitals all over the world are evidence that this service program of the Association is active and that the Association has just cause for pride in this branch of its activities.

To carry on Dr. Woolley's work, the Journal has fortunately secured the help of two outstanding women who have consented to serve as Assistant Editors. Both Dr. Dorothy Wells Atkinson of San Francisco and Dr. Ada Chree Reid of New York know of Dr. Woolley's plans and hopes for the future of the Journal. Dr. Reid was associated with her for many years in various undertakings, and Dr. Atkinson during the long months of her illness was a devoted physician and friend. Situated as they are, one on the East Coast and one on the West, they will be able better to represent the membership of the Association. The Editor welcomes them to the staff and is grateful for their interest and co-operation.

To all the contributors and to the members of the Editorial Board the Editor expresses sincere thanks for their assistance during 1946, and looks forward to their continued support throughout the coming year. To members of the Association an appeal is made for greater effort in submitting scientific articles, reports of cases and of staff conferences, and news of all activities. This is your Journal, and it will succeed only to the extent it receives the support of all members of the Association.

Elise S. L'Esperance, M.D.
Editor

The Use of Folic Acid in the Treatment of Macrocytic Anemias in Office Practice

MARION N. GIBBONS, M.D., F.A.C.P.

Dr. Gibbons is a Staff Member and Visiting Physician on the Medical Service of Woman's Hospital, Cleveland. Her practice is limited to internal medicine.

THE MYSTERY OF THE mechanism responsible for the various macrocytic anemias, their relationship to the intake of essential foods or the proper utilization of foods ingested has been unfolding in medical literature like a serially published detective story. To the practitioner of medicine whose scientific curiosity is whetted by the new concepts glimpsed as the component parts of the puzzle have fitted themselves into place, it would appear that we are now waiting only for the last chapter to reveal the final clues to the answer of the therapy of the macrocytic anemias—what constitutes the antianemic principle of liver and what is the "intrinsic factor" essential for normal hematopoiesis.

Many biological scientists including bacteriologists, investigators in the pre-clinical subjects, and clinicians have contributed to the solution of the fascinating problems involved; and since 1935 when the entity called "Vitamin M" by Day and his co-workers (1) was postulated, rapid progress has been made. In this early publication there was described a syndrome which developed in monkeys on a limited diet. The findings were leucopenia, macrocytic anemia, diarrhea, oral lesions, facial edema, weight loss, and finally death in the experimental animal. The investigators studied the relationship of lack of several factors of the B complex in the diet in the production of the symptom complex, and found that no known component of the B complex was protective. The unidentified, essential dietary factor was designated "Vitamin M."

In 1940 Snell and Peterson studying "Growth factors for Bacteria" found in yeast extract and solubilized liver fraction, rich sources of an essential growth factor for Lactobacillus casei. Earlier in the same year such a factor was isolated by Stockstad. He thought one active principle contained purine and a pyrimidine nucleotide. In 1941 Mitchell, Snell, and Williams (2) obtained a highly concentrated growth factor from spinach and because of its origins from green leaves suggested that it be called "Folic Acid." A very similar principle has been found, also, in yeast and liver, though there are variations in the effect on Lactobacillus casei growth in the factors isolated from the various sources.

An enzyme preparation from rat livers which produced a potent stimulating factor from inactive material by Wright and Welch (3) subsequently has been found to be of wide distribution in various animal tissues and organs. Day and his co-workers (4, 5) recently demonstrated that monkeys with nutritional macrocytic anemia respond to Lactobacillus casei factor given intramuscularly in small doses.

Many investigators have been struck by the similarity of the symptoms and laboratory findings in the monkey with nutritional anemia (early described as "Vitamin M deficiency") and those of sprue in man. It is no longer doubted that the two deficiencies, whether of inadequate intake or of inadequate utilization of certain food factors (of which folic acid is one), are quite similar (6).

For years good results have been obtained by the use of liver extracts, especially purified liver extracts high in the antianemic factor in the treatment of Addisonian macrocytic anemia, sprue and its anemia, and the macrocytic anemia of pregnancy. Yeast extracts, and dehydrated brewers' yeast (Winthrop 1939), have given encouraging re-

sults while the macrocytic anemia of pregnancy also responds well to oral liver extract. The macrocytic anemia of chicks was found to respond well to Vitamin B_6 and to folic acid (6, 7).

Recent medical literature contains many reports of remissions induced in various types of macrocytic anemias in man, by the use of folic acid. Spies (8) has established the therapeutic value of synthetic Lactobacillus casei factor in the following:

1. Nutritional macrocytic anemia
2. Addisonian pernicious anemia
3. Sprue
4. Macrocytic anemias of pregnancy
5. Macrocytic anemia of chronic alcoholism
6. Macrocytic anemia of cirrhosis of the liver and neuritis
7. Macrocytic anemia occurring with carcinoma of the stomach
8. Macrocytic anemia of indeterminate etiology

Vilter, Spies, and Koch (9) report that "Erythrogenesis occurred regardless of the route of administration, and of whether the macrocytic anemia was primary Addisonian or nutritional in type." In the same paper the authors state that "Synthetic folic acid is a potent hematopoietic agent. It is suspected, however, that it should be no more effective than liver extract in the treatment of macrocytic anemias."

Because liver extract has been so successful clinically most hematologists have advised the use of folic acid only in those patients who have shown sensitivity to liver extract. It has been appreciated that the long term use of folic acid might reveal that it is not the perfect remedy for all macrocytic anemias. It now appears that such skepticism may be warranted in a small percentage of patients.

Before the Central Society for Clinical Research, which met in Chicago in November, 1946, Vilter and Spies (10) presented a report on the occurrence of combined system disease in persons with pernicious anemia. While under treatment with the L. casei factor (folic acid) they reported observation on twenty-four pernicious anemia patients and two patients with sprue studied and followed at the Cincinnati General Hospital. Twenty-one pernicious anemia patients had been controlled for long periods of time, nineteen of them for longer than 2 years by injection of liver extract. Two were pernicious anemia patients in relapse, and two had sprue which was not well controlled by liver extract. All liver therapy was discontinued and folic acid was substituted for 10 to 12 months. The hematological picture was maintained satisfactorily for all patients but two. Four of the subjects, however, developed paresthesia in the extremities and an unsteady gait. Two of these patients were those who had developed moderate reductions in hematological values. When neurological signs increased until obvious evidence of combined system disease were present, L. casei factor by mouth was given in greatly increased dosage for 10 to 40 days "without subjective or objective improvement," the investigators stated. When no neurological improvement occurred or when progression of the disease was rapid, refined liver extract was given intramuscularly in doses of 5.0 cc. daily. Within 10 days following the administration of liver extract both subjective and objective neurological improvement occurred. The observers conclude that "Oral L. casei factor, 70 to 105 mg. in divided doses per week will usually maintain patients with pernicious anemia and sprue in a normal hematological state for a year, but will not prevent the occurrence of degenerative disease of the spinal cord and peripheral nerves."

Recommended dosages for folic acid in the treatment of various macrocytic anemias have varied; on the whole, however, it appears that smaller amounts than were earlier used are probably adequate (11).

In the twenty-six patients above reported by Vilter and Spies (9) dosage was oral and ranged from 10 to 15 mg. daily.

Moore, Bienbaum, Welch, and Wright (11) reported an early series of four patients, and later, in May, 1946, speaking before the Ohio State Medical Convention in Columbus, Ohio, Moore stated that as of that date he considered the minimal effective dose from 3 to 5 mg. of folic acid by mouth daily, and that maintenance of normal blood pictures had been sustained for six months on 25 to 75 mg. weekly, given parenterally to Addisonian pernicious anemia patients observed by him. Neurological findings had not changed in the six months under consideration. Moore suggested that it was too early to determine whether or not neurological changes could be indefinitely prevented or maintained without progression.

For pernicious anemia in relapse and for sprue, as well as in early treatment of the severe macrocytic anemias associated with cirrhosis of the liver, subtotal gastrectomy, or with pregnancy, most clinicians who have reported successful treatment advise intramuscular daily injection of from 30 to 50 mg. of folic acid until the maximum reticulocyte response is reached in ten to fourteen days. Folic acid is then given orally, or smaller doses are given parenterally at less frequent intervals, averaging 35 to 105 mg. total each week (12, 13, 14, 15, 16, 17).

Every practitioner knows, the variables of human

nature and of environment being what they are, that the treatment of an occasional patient is dictated by expediency, and the therapeutic aid of choice may have to be supplanted by a more readily administered agent. I wish to report the progress of three patients with Addisonian pernicious anemia who had been treated for long periods of time with injections of liver extract and all of whom were maintained in a satisfactory hematological state when they appeared regularly for treatment. But lapses in therapy were occasional and resulted in undesirable fluctuations in the blood picture.

Patient No. 1. E.G. Female, aged 73, a retired school teacher living on a small pension. Diagnosis of pernicious anemia was established in 1933. She had been maintained adequately on an average daily dose of one unit purified liver extract given intramuscularly. Mild signs of combined system disease were present in 1933 and consisted of hyperactive knee jerks, loss of vibration sense below the level of the knees, and diminished below the iliac crests. The Romberg was negative. No progression in neurological signs had occurred while under treatment with liver extract, though on three occasions failure to appear for treatment had resulted in a mild hematological relapse with reduction of red blood count to about 3.0 million cells. For some time she had maintained a red blood count of 4.2 to 4.6. Hemoglobin was 14 to 15 gm. Sahli. In the spring of 1946 she contemplated two trips, during which time, she frankly admitted, she probably would "forget" to watch the proper time interval for her "liver shots" and that she could not face the problem of finding a physician in various towns during her travels. She was, therefore, given 10 mg. Folvite* daily by mouth, and as a starter 15 mg. intramuscularly on May 28, 1946. Her chart follows:

Date	*Hb. Sahli*	*RBC*	*Medication*
5-28	15 gm	4.6	Folvite 15mg. i.m.
7-5	14 gm	4.3	Folvite 15mg. i.m.
8-26	13.5 gm	4.2	Folvite 15mg. i.m. 10mg. qd.p.o.
9-23	14 gm	3.34	Folvite 15mg. i.m. 10mg. qd.p.o.
10-7	14 gm	3.6	Folvite 15mg. i.m. 10mg. qd.p.o.
10-28	14 gm	3.9	Folvite 15mg. i.m. 10mg. qd.p.o.
11-18	15 gm	4.57	Folvite 15mg. i.m. 10mg. qd.p.o.

Note that in the four weeks from 8-26-46 to 9-23-46 the red count fell from 4.2 to 3.34. The patient in her usual optimistic manner had taken with her medication sufficient to give her 10 mg. daily, but only enough to last two weeks. After a few days she noticed that her supply of tablets was dwindling so she reduced the daily dose to 5 mg. with an occasional day without Folvite. Adequate response was then obtained with dosages noted. The neurological signs remained unchanged during 6 months of therapy.

Patient No. 2. E.M. Female, age 70. The diagnosis of Addisonian pernicious anemia was established in January, 1930. She was treated with liver extract intramuscularly, 30 units every 3 weeks with a resulting normal blood picture until November, 1945. She then discontinued therapy until 3-7-46 because of transportation difficulties and her desire to see if she could get along without liver extract, as her income, an annuity, does not give her much money with present living costs.

In March, 1946, she returned and it was found that rbc numbered 1.50 and hb was 11.5 gm. There was a sore, red tongue, weakness and distressing abdominal distention. Liver extract was given on 4-22-46. Hb. was 12 gm., and the patient said that she wished to receive less medication and to make less frequent trips to the office. It was thought that if her maintenance dose of folic acid were not large it would offer her a slightly less expensive method of control and fewer trips to the office.

Folvite was begun 4-22-46, 5 mg. tid. The record follows:

Date	*Hb. Sahli*	*RBC*	*Medication*
3-7	11 gm	1.5	Liver Extract 150 u
4-22	11 gm	3.6	Folvite 5mg. tid
5-18	12.5 gm	3.9	Folvite 5mg. bid
6-18	13 gm	3.14	Folvite 15mg. i.m. 5mg. qd.p.o.
7-16	13 gm	3.67	Folvite 15mg. i.m. 5mg. qd.p.o.
9-5	13.5 gm	4.2	Folvite 15mg. i.m. 5mg. qd.p.o.
10-18	13.5 gm	4.12	Folvite 15mg. i.m. 5mg. qd.p.o.
11-15	14 gm	4.24	Folvite 15mg. i.m. 5mg. qd.p.o.

Immediately appetite and strength improved. She has been able to perform house-keeping tasks that have been beyond her strength for the past 2 years. Only 6 months have elapsed since Folvite was begun. The neurological signs have been carefully watched and have not changed. We have provided her with folic acid since our supply graciously given by the manufacturer was exhausted. The reason why 15 mg. intramuscularly has been given on each visit is to make her monthly visit offer more than observation and hematological studies. It is, in a way, an inducement to patients No. 1 and No. 2 to return at regular intervals, as they are "conditioned" to receiving medication by injection. I thought until their needs were definitely known and the nervous system findings appraised for at least one year the fairly frequent visits would be advisable.

Patient No. 3. M.T. age 48. First seen March 24, 1938. Divorced, living in a rural community

* Folvite Lederle 5.0 mg. tablets.

about 60 miles from Cleveland. Diagnosis of pernicious anemia was made in November, 1934, by Dr. James Townsend of Boston, Mass. while she was living in that city. Dr. Townsend sent her report to me in June, 1935, after she had been away from Boston for two years, during which time her liver extract had been given at irregular intervals. She was in mild relapse and had some cord changes consisting of paresthesia of the extremities and definitely diminished vibratory sense over the malleoli. The blood picture of this patient was seldom at its maximum level for two reasons, first, she was not too conscientious in keeping her appointments for injection, and often she had trouble in finding her local doctor in when she tried to receive an injection. In her small community where she was employed and known she feared that her friends would learn she had pernicious anemia and she would, therefore, permit no one but the doctor to administer liver extract, or she would travel the sixty miles to my office and would arrive at unpredictable times. A medication that could be taken by mouth seemed ideal for this patient. On 5-21-46 Folvite was begun, 5 mg. daily being given by mouth. The record follows:

Date	*Hb. Sahli*	*RBC*	*Medication*
5-21	13.5 gm	4.0	Folvite 5mg. qd.p.o.
6-18	13 gm	3.99	Folvite 5mg. qd.p.o.
7-17	13.5 gm	4.24	Folvite 5mg. qd.p.o.
9-3	13 gm	4.2	Folvite 5mg. qd.p.o.
11-26	13.5 gm	4.7	Folvite 5mg. qd.p.o.

No advance in neurological signs has been evident.

What is folic acid and how does it act? In Science for May 31, 1946, Angier and co-workers (18, 19) published the structural formula of liver L. Casei factor and suggested that pteroylglutamic acid would be an appropriate abbreviation for this compound. Several suggestions have been advanced as to the possible role of this agent in food utilization. Editorially, the American Journal of Medicine stated in August, 1946, (20): "The evidence indicates that pteroylglutamic acid is an important maturation factor performing some specific function in the maturation of erythrocytes and probably also of other formed elements of the blood." Berry and Spies (21) state: "L. Casei factor is not the extrinsic factor since it acts in the absence of normal gastric juice, and also parenterally." They also surmise that folic acid and other antianemic factors may act in a similar overall manner, but by different routes, and suggest that "folic acid conjugates are stored in the human body and that liver extract may contain a substance capable of liberating from them the substance which acts on bone marrow." Davis (22) believes that "liver extract and folic acid act by increasing in some manner the formation of cholinesterase in the body." Liver antianemic principle does contain some glutamic acid though it is not identical with folic acid. Much more folic acid is needed to produce remission in Addisonian pernicious anemia than is required of the liver antianemic principle. Probably the folic acid content of crude liver is its active antianemic principle (21).

Conclusions: In selected cases of macrocytic anemias, where expediency dictates, folic acid may be used orally to control the hematological picture. It appears, however, that in spite of full therapeutic doses of folic acid the neurological damage is progressive in some patients. Careful observation of all patients under folic acid treatment is essential to detect such change and to resort to liver therapy in the event that it occurs.

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PUTNAM FELLOWSHIP FOR ADVANCED RESEARCH

Radcliffe College invites applications for the Helen Putnam Fellowship for Advanced Research. The committee on award would be interested in receiving nominations immediately from eligible women scholars who have research in progress in the field of genetics or of mental health, broadly defined. The fellowship will pay a stipend of $2,000, and the tenure of the fellowship will run for a term of eleven months from October 1, 1947, with the possibility of a renewal for a similar period. All normal laboratory facilities will be provided to the holder of the fellowship. Each fellow will be assigned room and board (at cost) in one of the Radcliffe graduate houses and will be expected to be in residence during the tenure of the fellowship. No restrictions as to age will be imposed by the committee on award. In general, however, the committee will limit its choice to mature women scholars who have gained their doctorate or who possess equivalent qualifications. Applications for the award should be submitted to Radcliffe College not later than April 1, 1947, and the announcement of the appointment to the fellowship will be made on or about May 1, 1947. Application forms may be secured by addressing the Committee on the Helen Putnam Fellowship for Advanced Research, Radcliffe College, Cambridge 38, Massachusetts.

DUTCH NATIONAL HEALTH CONGRESS

During September, 1946, the first Dutch National Health Congress was held at Amsterdam for 1,200 members.

Miss P. H. C. Tibout (M.D.) psychiatrist, read a paper on "Child Psychiatry and Mental Hygiene." She expressed her views about the factors involved in personality-disturbances, the means by which to acquire an insight into the mental and physical make-up both of the child and its surroundings and the best way to organise the teamwork needed for such an all-round examination.

The cardinal factors to be investigated are:

1. The material and statical environmental possibilities of the surroundings.
2. The psychological factors in the environment; a) having influenced the child in the past and b) influencing it at present.
3. The physical constitution and condition.
4. The intellectual and temperamental condition.
5. The level of structural development and maturation.
6. The libidinal and emotional development.
7. The mechanisms of defence and the patterns of adaptation formed.

The audience proved to be very much interested, especially in the aspects regarding postwar reconstruction.

Henrietta A. Lohr, M.D.
Van Eeghenstraat 105
Amsterdam Z, Holland

November 12, 1946

Dr. Deane is Parasitologist, Amazon Program, Service Especial de Saude Publica (which is maintained jointly by the Ministry of Education and Health of Brazil and the Institute of Inter American Affairs), Belem, Brazil.

Tropical Diseases in the Amazon Region of Brazil

And What Is Being Done To Control Them

MARIA PAUMGARTTEN DEANE, M.D., M.P.H.

The Region

The Brazilian part of the Amazon region extends through an area of about 3,600,000 square kilometers, or approximately one half of the area of continental United States.

Two states (Para and Amazonas) and four federal territories (Amapa, Rio Branco, Guaporé, and Acre) are within the region, more than one half of which is formed by the world's most extensive forested flatlands, crossed from West to East by the Amazon River, which with its numerous tributaries holds the largest volume of water for a single river basin.

Only two seasons, of approximately six months each, occur: one rainy season, and a so-called dry season, when it rains less. Humidity is high and temperature fairly steady throughout the year, except in the upper rivers near the boundaries of Peru and Bolivia, where cold waves, due to the thawing of the Andes ice caps, occur with irregular intervals, during two or three months each year.

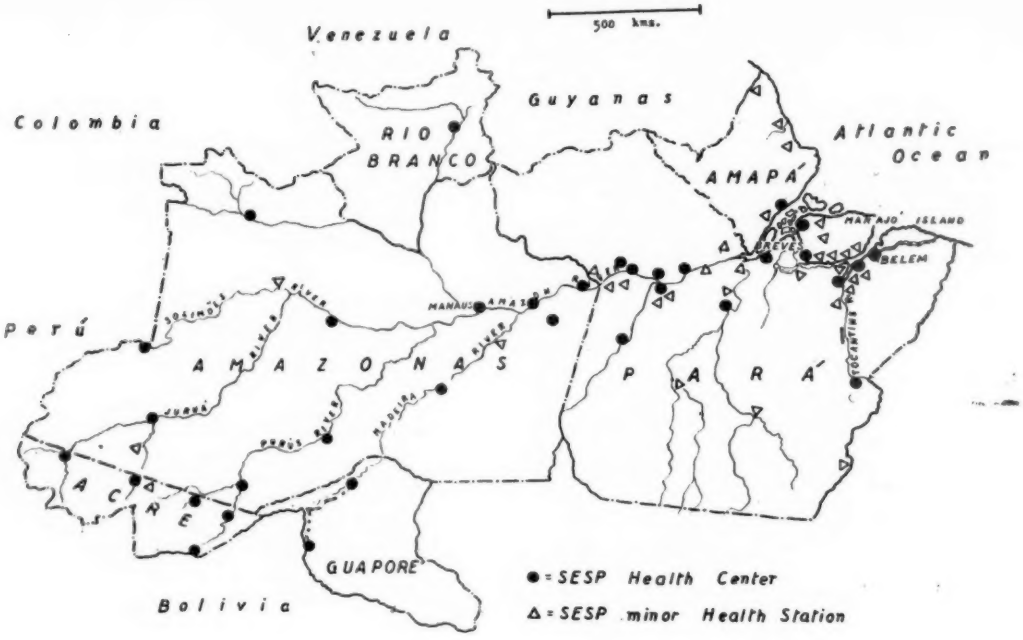
There are three main types of terrain: the "igapós," or permanently flooded forests, the "varzeas," which are only periodically flooded, and the "terras firmes," which are not reached by the floods.

The region is very thinly populated, for although covering more than four tenths of the area of Brazil it is inhabited by only 1,500,000 people, or one thirtieth of the population of the whole country. Except for the cities of Belem and Manaus, with about 200 thousand and 70 thousand inhabitants respectively, the population lives in small towns and villages with from a few hundred to less than 10 thousand people, or scattered throughout the region, mostly along the rivers.

The population is largely constituted of "caboclos," which is the local term for the product of white and Indian mixture. Negro slaves were brought in only in small numbers. The white population is mostly of Portuguese origin, but Syrians, Germans, Italians, and others have a share in the present racial composition of the area. There are still many Indian tribes with little or no contact with civilization and a few of them still wage war against the white invader.

The waterways provide the principal avenues for transportation. Although most of the larger rivers are navigable throughout the year, even to some extent by transatlantic boats, some of the more remote localities in the basin are accessible by boat during the rainy season only. The large number and size of rivers, lakes, and boggy areas, the periodical floods, and the instability of the soil, all contribute to make construction of roads extremely difficult. Dr. J. Allen Scott, the American parasitologist, who recently visited the Amazon, said very adequately that a road through the lower half of the valley is something like "a bridge-builder's nightmare." In the whole area there are only about 750 kilometers of railroads and a few hundred kilometers of highways. Aviation is now solving in great part the problem of transportation in this region of long distances. Airplanes fly almost daily to the principal localities and it is now possible to go in one or two days from Rio or Belem to the towns of Acre, close to the Bolivian frontier. Telegraphic and radio communications exist with most towns and villages.

THE AMAZON REGION OF BRAZIL



From the first half of the nineteenth century up to the beginning of the twentieth, the Amazon region supplied most of the world's rubber. With the development of the automobile the demand for rubber increased steadily and the economy of the valley was based chiefly on its export. A flow of immigrants poured into the area, mostly from the Northeastern States of Brazil. Rubber was called the "black gold," but, because of the awkward, almost medieval system which then developed, only the landowners got profits, sometimes fabulous ones. Most of those who got rich at the time—Brazilians and foreigners alike—spent their money in other places and did not try much to improve living conditions in the Amazon. In the meantime the British had taken rubber seeds from the Amazon to the Orient, and soon their plantations yielded more rubber and with greater facility than the native Brazilian trees scattered through the Amazon forests. From then on the economic life of the valley was based chiefly on the export of Brazil nuts, fibers, timber, oil seeds, and other products of the native forests, and also on some cattle raising. Attempts to develop agriculture on a scientific basis were started. By the beginning of the second World War, when the oriental rubber plantations fell into Japanese hands, the Amazon valley was again one of the chief sources of rubber for the Allied Nations.

Public Health Problems and Services

Malaria, infant mortality, enteric diseases, ancylostomiasis, yaws, venereal diseases, leprosy, and alimentary deficiencies are the most prominent public health problems in the Amazon basin.

There are State and Federal Health Services but, except for specialized organs such as the National Tuberculosis Service, National Leprosy Service, and National Yellow Fever Service, they are mostly restricted to the cities and larger towns. In 1940 a decision was made by the Federal Government to reorganize the Public Health Services on a more ample basis as part of a vast plan of economical development of the Amazon region. In 1942, as a result of Roosevelt's "good neighbor" policy and of the Allied Nations need of rubber, an agreement was signed between the Brazilian and American governments, from which the "Servico Especial de Saude Publica" or SESP, was born. The contract was first made on a one and a half year basis and later was extended up to the end of 1948.

To SESP was assigned the job of giving sanitary assistance to the rubber worker ("seringueiro") and to start a program of public health development throughout the valley. At the end of 1948 the Brazilian Government will take SESP under its entire responsibility.

The program of SESP includes chiefly rural Public Health. The Federal and State Health Departments look after the larger cities and specialized services such as tuberculosis, leprosy, and yellow fever.

As a result of the scarcity of medical doctors in the region, few of the smaller towns can boast of having a private practising physician and thus SESP had to include medical assistance in its program, in addition to its purely public health activities. The general organization of SESP is given in the annexed chart. A large program of training is being undertaken. Doctors and nurses are brought in from Southern Brazil and fellowships are granted for public health courses in Rio de Janeiro, Sao Paulo, and the United States.

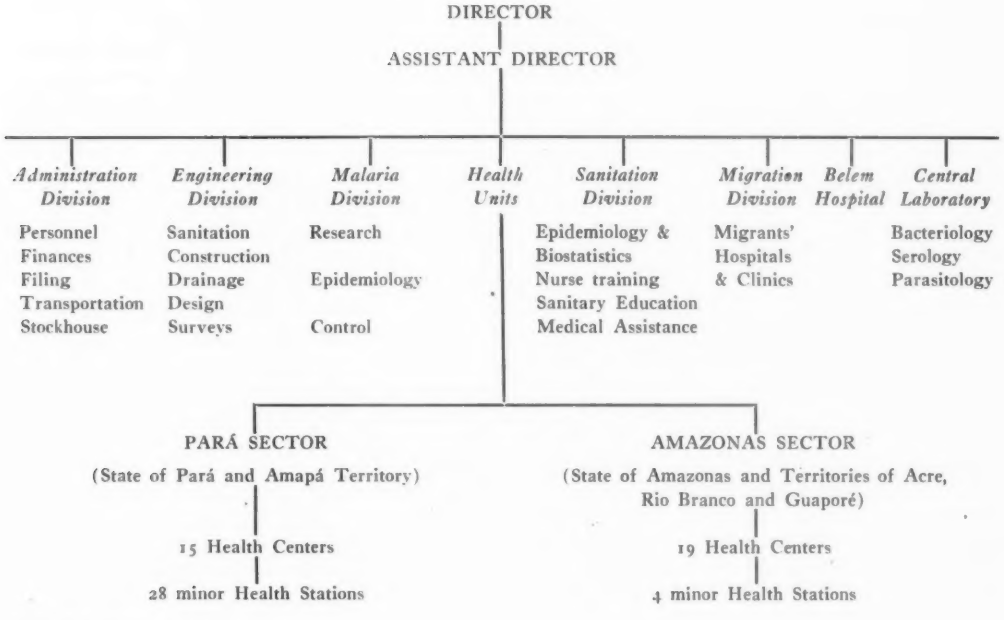
In the beginning SESP was given the technical assistance of American doctors, scientists, nurses, and sanitary engineers, some of whom are still at work in the Amazon. During the war SESP's Migration Division (see chart) had the responsibility of selecting the "seringueiros" coming to work in the region and of assisting them during their long trip up to the rubber areas.

Special emphasis is being made on the sanitary education of the population, and clubs modeled after the "Four-H Clubs" of the United States are being installed in schools in most localities, with surprisingly good results.

Health Districts are functioning in thirty-four localities, many of them in buildings specially constructed by the Engineering Division of SESP. Their activities include: Control of Transmissible Diseases, Child Hygiene (including pre-natal, natal, infant, pre-school, and school care), Sanitary Education, Sanitation, Food Inspection, Physical Check-ups, Medical Assistance, Administration, and Biostatistics.

CHART SHOWING THE GENERAL ORGANIZATION OF THE SERVICO ESPECIAL DE SAUDE PUBLICA

AMAZON PROGRAM



Tropical Diseases and What Is Being Done for Their Control

Malaria. This is possibly the number one problem of the Amazon basin. Previous records suggested malaria to be highly endemic throughout the region and epidemics were said to occur periodically, killing many, chiefly among newcomers from Northeast Brazil and elsewhere. Recent records show a moderate endemicity in most areas, and high endemicity in a few; but some localities are found to be entirely free from malaria. Extensive and severe epidemics are not known to have occurred in recent years. This apparently lower incidence of malaria is probably due in part to better medical assistance and large distribution of drugs, and in part to the development of a certain degree of immunity among the imported population.

During the last four years the examination of more than 185,000 blood slides from seventy-six localities has shown a parasite rate of 3.1 per cent. The examination of about 43,500 spleens showed a spleen rate of 12.6 per cent.

Of the four known human plasmodia, *Plasmodium vivax* is the most common species in the region (63.2 per cent of the total positive bloods), but *P. falciparum* is quite frequent (36.6 per cent). *P. malariae* is rare if the region is taken as a whole (0.2 per cent), but has a peculiar distribution, being rare or absent in most areas but quite frequent in some. *P. ovale* has not been reported from the Amazon region.

The principal malaria vector is the indigenous *Anopheles darlingi.* This mosquito finds good breeding conditions throughout the region and is highly domestic, seeking for blood inside the houses, chiefly during the late hours of the night when the inhabitants are asleep and unaware of its presence. Its high susceptibility to infection, its well developed adaptation to local conditions, and its apparent liking for human blood, make it possible for *A. darlingi* to maintain endemic malaria or produce epidemics even when the crop of adult mosquitoes is relatively small.

The second most important vector is *Anopheles aquasalis* (-tarsimaculatus) which, being a brackish water breeder, transmits malaria only in the coastal areas. The other twenty-eight species of Anophelines reported from the region seem to be of little or no importance as malaria vectors.

The control of malaria in several areas in the Amazon has been attempted before, but systematic large scale measures were only undertaken by SESP. The experience gained with the previous control of yellow fever in all Brazil and of *gambiae*-transmitted malaria in the Northeastern States induced SESP to put emphasis on anti-mosquito work rather than on drug treatment or drug prophylaxis. However, the urgency of keeping the rubber gatherers fit for their job led to a liberal distribution of drugs. Quinine not being available during the war, atabrine was used almost exclusively, about 18 million tablets being distributed in four years.

For the control of *A. aquasalis* in Belem, a 6 kilometers dike has been built around the lowland part of the city, with flood-gates which allow the running out of brook and rain water, but prevent the coming in of the brackish tidal water.

For the control of *darlingi*-transmitted malaria in Amazonia, the application of DDT in houses seems to be the most feasible method, because of the domestic habits of the adult mosquito. The use of larvicides is too expensive and the very conditions of the soil make large scale permanent drainage works technically difficult or economically impossible, except on a local basis.

DDT has been used on an experimental basis in the little town of Breves, where the inner walls of all houses were sprayed with a 5 per cent DDT kerosene solution. Results were so encouraging that the measure was extended to several other localities. At first intervals of two months between each spraying were kept, but these were later lengthened to three and then to four months. If DDT-water suspension proves effective, it will eventually replace the kerosene solution, as it is much cheaper and more easily applied.

In larger towns and cities the control of malaria cannot rely solely upon DDT. Other measures, such as permanent drainage, will have to be used as far as is economically and technically possible. However, in rural or jungle areas, DDT is considered the best single measure for control of *darlingi*-transmitted malaria, and it is hoped that in the near future the rural household will have the responsibility of its own protection through DDTization of the house.

Amebic dysentery and other enteric protozoan or bacterial infections. These are quite prevalent in the Amazon Valley. Most of the cities and towns were built either centuries ago or during the rubber boom, without any thought being given to sanitation. Most of them have no water or sewage treatment systems, and in those that do have such facilities, the treatment and maintenance are inadequate. The dysenteries figure in Public Health statistics as the third most common cause of death (the first being tuberculosis, and the second malaria).

In surveys made in towns in the interior by direct examination of fresh fecal smears, the rate of infection by *Endamoeba histolytica* has been around 5 per cent. This figure is however quite conservative, since we knew that a single examination of stools, according to estimates made by several authorities, does not detect more than one third of the actual infections. Liver or lung abscesses are quite infrequent.

As for other intestinal protozoa, the figures found in the mentioned surveys were as follows:

	Per Cent
Endamoeba coli	10.8 to 30.0
Endolimax nana	1.0 to 10.0
Iodamoeba buetschlii	2.5 to 8.5
Giardia lamblia	3.7 to 8.3
Trichomonas hominis	2.0 to 9.8
Chilomastix mesnili	1.2 to 2.5
Balantidium coli	0.1 to 1.3

In a group of school children examined in a village near Belem, the rates were higher for *E. coli* (34 per cent), *E. nana* (20.4 per cent), *I. buetschlii* (12.3 per cent), and *G. lamblia* (20.4 per cent). In the same group 28.1 per cent of *E. histolytica* infections were found.

Although the pathogenicity of *G. lamblia* is still discussed by foreign authorities, it is the experience of doctors working in the Amazon, that severe cases of dysentery are frequently met with, especially in children, in which this flagellate abounds in stools, and any other condition which might be the primary cause of the disease is apparently absent.

Except for *E. histolytica, G. lamblia,* and *B. coli,* there is no evidence, here as elsewhere, that the other intestinal protozoa might be by themselves pathogenic.

Among the bacterial enteric diseases, typhoid, shigelloses, and salmonelloses are prevalent. Typhoid fever is endemic throughout the year, though epidemics often occur early in the rainy season. Among the Shigellas, *S. flexneri* and *S. sonnei* are the most frequent; so far only one case of Shiga has been reported. Of the Salmonellas, *para-B, enteritidis,* and *suipestifer* are more frequently detected.

The control of enteric infectious diseases, known to be mostly water or food-borne, is obviously a long term proposition which has to be based chiefly upon sanitation and education. The first of these measures is being undertaken by the Engineering Division of SESP, which is installing water supply systems in the towns of the interior and constructing sanitary privies. To such works SESP contributes personnel and technical advice, and sometimes financial help, but their cost is mostly paid by municipal and state governments.

A Sanitary Education program is in progress through the Health Clubs already mentioned and through the showing of films and "slide sound" devices especially made for this purpose.

Each case of typhoid is investigated and contacts are vaccinated. Vaccination against typhoid and paratyphoid is largely accomplished through SESP in the Health Centers.

Hookworm infection is quite frequent, as would be expected in a region of tropical climate and with a population largely rural. Based on surveys made in several localities by direct examination and using Faust's concentration method, we estimate that about 40 per cent of the rural population harbors Ancylostomidae. Determination of species made by SESP personnel in a small sample have so far demonstrated the presence of only *Necator americanus,* but Gordon (1922) found also *Ancylostoma duodenale,* in a proportion of one *A. duodenale* to 4.5 *N. americanus.*

Tropical anemia is quite frequent, but it is probably due more to a diet poor in iron than to massive hookworm infections. Egg counts made in the ancylostomiasis cases revealed a large proportion of moderate or low infections, and only in rare instances were massive infections (more than 500 worms) found.

Control measures for hookworm have been basically the same as those used for amebic and bacterial enteric diseases, i.e., general sanitation and education. No mass treatment has been attempted, but antihelminthics are administered through the Health Centers.

Filariasis is endemic in the city of Belem. A blood survey made in 1942-43, with the collection of 5000 samples during the night among the population of the poorer sections of the city, showed 10.8 per cent harboring the microfilariae of *Wuchereria bancrofti.* Detailed observation on a small group of infected people showed that the microfilariae have the typical nocturnal periodicity. The chief vector of *W. bancrofti* in Belem is *Culex fatigans.* Dissections of more than one thousand mosquitoes of this species caught in houses during the blood survey showed 11.6 per cent harboring filarial larvae, some in the infective stage.

A large proportion of human infection is nonapparent and elephantiasis is observed in only 1.3 per cent. In all these cases the elephantiasis was localized in the lower limbs and genital organs.

Blood surveys in many other localities of the

valley revealed very few infections and, as far as could be determined, these had probably been contracted in Belem. Thus, although medical texts usually show maps in which the whole region is black with filariasis, Belem is at present thought to be the only focus of the disease in the Brazilian section of the Amazon Valley. Again in spite of the information found in some text books, species other than *W. bancrofti* seem to be absent or extremely rare.

Filariasis will disappear from Belem with the progress of a general sanitation program which will eliminate *Culex fatigans*, as was demonstrated in another Brazilian city, Salvador (Bahia), which used to be highly endemic and is now almost free from the disease.

Other helminthic diseases. Among other nematodes, *Ascaris lumbricoides, Trichuris trichiura, Strongyloides stercoralis,* and *Enterobius vermicularis* are known to be present. Fecal surveys showed about 80, 60, and 20 per cent of the rural population harboring Ascaris, Trichuris, and Strongyloides, respectively. The same surveys showed about 4 per cent of *E. vermicularis,* but obviously this is not the actual rate, since as is well known one has to use the anal swab method to be able to detect most of the infections.

Trichinosis has never been reported from the area and has not been detected in a number of rats and hogs examined for this purpose.

Beef and pork tapeworms are quite infrequent in the Amazon region, probably because of the habit of thoroughly cooking the meat. Hydatic disease is rare and, except for occasional infections by *Hymenolepis nana,* other tapeworms are not known to occur.

As for trematode infections they apparently do not occur in the region. Some American texts state that *Schistosoma mansoni* is endemic in the Amazon Valley, but this is a mistake probably caused by the misinterpretation of data seen in a publication by Davis, of the Rockefeller Foundation, concerning his findings in the examination of liver sections taken post-mortem by viscerotomy for detection of yellow-fever cases. Among 2613 liver sections of people dying in the Amazon region, Davis found six with *S. mansoni* eggs. Such cases are, however, explained by the migrations of people from Northeast Brazil where the disease is endemic. No autochthonous case has ever been found in the Amazon and all those discovered by SESP (three) or private doctors had contracted their infection in other areas. No intermediary hosts of human schistosomes have thus far been encountered in the region, although they have been sought for during the extensive examinations of water collections made for the study of mosquito breeding places.

Yaws is a local problem in a small area (Breves), but has a low incidence or is practically absent in most of the region. The endemic area is formed by a number of islands in the low part of the Amazon River. Here a very high proportion of the rural population is infected since childhood and not infrequently advanced cases are found with extensive bone lesions.

The control of yaws is being attempted by SESP through mass treatment with arsenical compounds and penicillin. A team of doctors and sanitary inspectors, who have at their disposal a small launch, go from place to place attending the sick and applying injections.

Pinta or Carate, the singular skin disease which was recently shown to be due to a spirochete (*Treponema carateum*) is present in the higher areas of the valley, chiefly along the Solimoes, Jurua, and Purus rivers. Although very little is yet known about the transmission of the disease, the assumption made by several authors that the black-flies (*Simuliidae*) play a role in it is reinforced in the Amazon region, where the distribution of pinta seems to coincide with the distribution of such insects. The infection is quite rare among white people and, very frequent among the Indians. As a matter of fact, it is reported that there are Indian tribes which think it nice to have the skin patched in different color tones and inoculate their children with the disease.

Little is as yet known about the control of pinta, but control should probably be based on mass treatment as for yaws, since cure of early cases is easily obtained with small doses of arsenical compounds.

Leishmaniasis, both visceral and mucocutaneous, is present in the Amazon region. Mucocutaneous leishmaniasis is endemic throughout the region, chiefly in its higher portion, but only people who live or work in the jungle are usually attacked. Both mucous and cutaneous lesions are to be found, especially around the nose and lips. As many as 60 species of *Phlebotomus* (sand-flies) have already been reported from the area, but those responsible for the transmission of *Leishmania brassiliensis* are so far undetermined. The fact that only people in close contact with the jungle become infected leads to the impression that there may be sylvatic animal reservoirs.

Although a few cases of visceral leishmaniasis had been reported from Argentina and Paraguay, it was only in 1934 that attention was called to

the presence of this disease in the New World, after H. A. Penna, a Brazilian doctor working for the Rockefeller Foundation in Bahia, reported his findings of leishmania in sections of liver examined by postmortem viscerotomy in Brazil. Out of a total of 47,000 liver sections thus examined, 41 had leishmanias, 4 of which were collected from people dying in the Amazon. From 1936 to 1939 a medical commission of the Oswaldo Cruz Instituto, led by Dr. Evandro Chagas, studied the disease in different parts of the country. In the Amazon region the disease seems to be present only in a very restricted area, which includes Marajó Island, a small zone in the littoral of the mainland north of Belem, the Para River, the lower part of the Moju River, and the mouth of the Tocantins River. It is sporadic, no epidemics being known to occur. Only 20 humans out of nearly 6000 examined, 15 dogs out of about 1000, and 1 cat out of 300, were found infected; half of the humans were children of less than ten years of age. The surveys were made by spleen puncture of all people with enlarged spleens, and, with dogs and cats, by liver puncture of all those found in the areas being studied.

None of the infections were found inside of towns or in the "varzeas" which are subject to tidal rises twice a day; all were encountered in the outskirts of villages or in forested areas of "terra firma." The symptoms and pathology in human beings were found to be indistinguishable from those of the Old World kala-azar, and the agent was first thought to be a new species which was called *Leishmania chagasi,* but later was shown to be identical to *Leishmania donovani.* The vector of the disease is supposed to be the sand-fly *Phlebotomus longipalpis,* which is the only insect whose distribution coincides with that of visceral leishmaniasis; it is easily infected in the laboratory and was found naturally infected with leptomonads in the endemic area of the Amazon. More than 3000 vertebrates have been examined in the search for a possible wild reservoir for the disease, but so far results have been negative. It has not been decided as yet whether visceral leishmaniasis found in the New World is autochthonous to the continent, or imported from Africa with the slaves or from the Mediterranean during colonial times.

From what has been said it is obvious that, although present, visceral leishmaniasis is not an important public health problem in the Amazon. As for mucocutaneous leishmaniasis, its incidence is low and, since the disease attacks only people who live or work in the jungle, its control is not being attempted at present because other problems are thought to be more urgent and deserve first attention.

Chagas' Disease is not known to occur in the region, and a good reason for this is that no domestic species of triatoma bugs (which are the usual vectors of American trypanosomiasis) have been found, with the exception of *Triatoma rubrofasciata,* the cosmopolitan species which is well known as a rat parasite and which does not seek for human blood under natural conditions. On the other hand many sylvatic species of triatoma bugs have been found (*Rhodnius brethesi, R. pictipes, R. robustus, Panstrongylus geniculatus, P. lignarius, P. rufotuberculatus, Eratyrus mucronatus,* and *Cavernicola pilosa*), and *Trypansoma cruzi* infections were detected in a number of wild animals, such as monkeys, armadillos, opossums (two species), ant-eaters, ferrets, and nine species of bats, but not in human beings.

Yellow fever was once a major problem in the Amazon Valley as in other places of Brazil. During the rubber boom, immigrants were frequently decimated by epidemics and the fact is still well remembered of entire European theatrical companies, contracted by the rubber lords to give performances in the Manaus theater, dying of the disease. The yellow fever campaigns, initiated in 1910 by Oswaldo Cruz and later under the technical orientation of the Rockefeller Foundation, yielded the brilliant result of practically wiping out urban yellow fever from the country, through the control of *Aedes aegypti.* This was achieved by a house-to-house fight, destroying, oiling, or protecting water collections capable of being breeding places for the mosquito larvae. In 1932, when hope existed of entirely extinguishing yellow fever from Brazil, some species of monkeys were found to be naturally infected by the virus. Through wild mosquitoes the virus maintains endemically in the monkeys the so-called "jungle yellow fever," which could be the source of "urban" yellow fever epidemics should the virus be introduced in towns or cities with *Aedes aegypti.* The answer for this threat has been to maintain the Yellow Fever Service (since 1939 under the entire responsibility of Brazilian technicians) with the job of: (1) keeping a close eye on all localities which are or will eventually be freed from *A. aegypti;* (2) to pursue the control of *A. aegypti* in its last-ditch localizations; (3) to continue the practice of viscerotomy in all people dying of acute infectious disease in areas where jungle yellow fever is known to occur, or in closeby areas, for detection of new cases; (4) to enforce immunization (by the so-called "17-D" virus, cultivated in chick embryo,

and having been made to lose its viscero and neurotropisms) of all people dwelling in such areas or traveling to or from such areas.

From 1931 to the end of 1945 only 68 cases of yellow fever were found in the Amazon region of Brazil, of which 56 were of the jungle type. Out of 23,337 localities routinely inspected (in all Brazil), 21,815, or more than 90 per cent, were found to be free of *A. aegypti* by the end of 1943. In the Brazilian part of the Amazon basin the mosquito may at present be found only in the extreme western portion, close to the Bolivian border. Up to the present more than 400,000 vaccinations have been performed in the Amazon region.

Leprosy is a serious problem in the Amazon region. About 3000 lepers are known to exist in the Valley. Specialized doctors of the National Leprosy Service travel regularly through the region looking for new cases which are recorded and eventually isolated and treated in colonies specially built for the purpose. So far only a little more than half of the known patients are thus isolated. The job is a difficult one because it is always hard to convince the patient and his family that the case should be isolated, for the disease being a chronic one and seldom cured, they know that isolation is most frequently for life. Contacts are regularly examined. The non-contagious cases are treated in out-patient special clinics, where they are also regularly examined, to be immediately isolated should they become infectious. The goal presently hoped to be reached is the isolation of all contagious cases. The colonies are built on modern basis, with isolated houses for families, and attempts are made to provide for the patient as normal a life as possible, with work and recreation. The children born in the colonies are immediately separated from their parents and brought up in special private institutions where they are kept under close observation.

Tropical ulcer is very frequent among the poorer classes of the towns, and among rural or jungle workers. In out-patient clinics in the interior the disease is always one of the most frequent. Vincent's association (*Spirochaeta vincenti* and *Bacillus fusiformis*) is practically always found in the microscopic examination of smears from the ulcer. The lesions are found only in the lower limbs in the great majority of patients. No special measures are in practice for the control of tropical ulcer, however cases are treated in the Health Centers, mostly with arsenical compounds.

Although *smallpox* cannot properly be called a tropical disease, it may be mentioned that up to the beginning of the century it occurred in dreadful epidemics, but its control has now been achieved through enforced vaccination. Also plague has been controlled and no cases are known to have occurred in the Brazilian part of the Amazon region since 1912.

Obviously enough, not all known tropical diseases could be dealt with in an article of this nature, but attempts have been made to give some information about the most important of those met with in the Brazilian part of the Amazon Region.

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The Use of Curare in General Anesthesia

LOIS L. WELLS, M.D.

PRESENT-DAY ANESTHETIC AGENTS AND TECHNIQUES all have certain inadequacies. Situations arise, occasionally, in which the patient is subjected to hazards, the surgeon is frustrated, and the anesthetist is embarrassed. We are constantly endeavoring to secure safer anesthesia for the patient, better working conditions for the surgeon, and more peace of mind for the anesthetist. To help meet this aim, curare has been introduced as an adjunct to anesthetic drugs, to secure complete abdominal relaxation. I would like to tell a little about its interesting historical development and its pharmacology, and give a word of warning about its use.

It is a far cry from the jungles to the modern operating room but curare has made that trip. For centuries the Indians of South America have been using "arrow poison" in hunting, to paralyze their game. This they concocted from the bark, vines, and leaves of several species of plants. In 1595 Sir Walter Raleigh introduced this "arrow poison," or curare, to civilization and told vividly of its use by the Orinoco natives. In 1815 Watterton and Brodie demonstrated that asphyxia was the cause of death in arrow poison. In 1850 the French physiologist, Claude Bernard, investigated curare pharmacologically and confirmed the, as yet unrefuted, fact that curare kills only by asphyxia accompanying respiratory paralysis. He discovered that the drug acted upon the neuromuscular junction. Since Bernard's time curare has been the ideal laboratory drug for blocking nerve impulses between the nerve fibers and the muscles.

Although the drug has been used occasionally in the treatment of convulsive states, such as tetany, strychnine poisoning, and chorea, and has been advocated for the control of muscle spasm in spastic disorders, until recently it had not gained a definitely useful application in clinical medicine.

One factor alone was responsible for this delay in scientific and clinical use. The batches of curare which came out of the jungle to civilization were too small for biological standardization and rarely were two batches found which were identical in potency and toxicity. The primitive curares were made by the Indians and packed in bamboo tubes, small clay pots or jars, dried gourds, etc., and their contents varied from region to region and from day to day, depending on the material at hand and on witchcraft.

The introduction of clinically adequate curare into this country in 1938 was due to the efforts of Mr. Richard Gill who was intrigued with the clinical possibilities of the "Flying Death" and spent many years among the Ecuadorian Indians, learning the secrets of its extraction and obtaining many botanical specimens. Pioneering pharmacological and clinical endeavors were instituted at the University of Nebraska and the drug was released to a commercial firm in 1939. Now under the name "Intocostrin" (Squibb) it is in common use as a means of reducing the violence of the convulsions associated with metrazol or electric shock therapy.

Curare acts peripherally and paralyzes skeletal musculature progressively and quantitatively. The muscles of cranial origin are affected first, then the muscles of the trunk and extremities, and lastly the diaphragm. Overdose causes respiratory paralysis from which recovery is complete if artificial ventilation of the lungs with oxygen is maintained during the paresis. Curare acts by interference with the chemical transmission of impulses to the motor end-organs and does not affect either the conductivity of the nerve or contractibility of the muscle fiber. Curare is partially destroyed in the liver and partially eliminated, unchanged, by the kidneys. No evidence has been found that tends to show that liver or kidney impairment prolongs or intensifies the action of curare. No direct effect on the heart is reported. No permanent or temporary organic damage has yet been demonstrated following the use of curare. Recent investigation seems to indicate that large doses may affect, to some degree, the autonomic and central nervous systems.

Now that the pharmacology of the drug is better understood and an adequate supply of the purified curare is available, its clinical use is expanding.

In an attempt to obtain complete muscular relaxation for abdominal operations in the resistant patient, Griffith and his co-workers in Montreal, in January, 1942, administered intocostrin intravenously to patients under light cyclopropane anesthesia. In their first reported series of twenty-five cases, injection of 4 or 5 cc. resulted in complete muscular relaxation without respiratory paralysis. Since the patients were under gas anesthesia, resuscitation with oxygen was immediately available and prostigmine, the antidote for curare, was kept at hand. These workers were impressed with the dramatic effect of the drug with no apparent harm to the patient and recommended that the investigation be continued; but they pointed out that it is a potentially dangerous poison and should be used only by experienced anesthetists in well equipped operating rooms.

In 1934 Cullen reported a longer series of cases with the same good results. Since that time anesthesiologists from many places have been confirming the earlier work, extending its use, and emphasizing the same precautions.

In general, the technique of inhalation anesthesia is not modified when intocostrin is to be used. Pre-medication should include atropine or scopolamine. Induction is carried out and anesthesia maintained in light second plane. An unobstructed air-way is essential. Estimated doses of curare are given intravenously when relaxation is needed, as for opening or closing the peritoneum. Results are obtained in from one to two minutes. Initial doses vary with the patient, from 3 to 4 cc.; and a second smaller dose, usually about 2 cc., may be given if the effect of the first wears off. Artificial respiration by pressure on the breathing bag should be started if the respiration becomes shallow and should be continued as long as necessary.

Cyclopropane is the anesthetic agent most frequently used with curare, but ethylene, nitrous oxide, or ether may be used. If ether is the anesthetic used, the doses of curare must be one-third of the usual dose used during gas anesthesia, for ether itself has a curariform action.

Certain precautions must not be overlooked. There is a narrow margin between the effective dose and the dose which produces respiratory depression, and adequate facilities for artificial ventilation must be at hand. Myasthenia gravis is an absolute contraindication to the use of curare during anesthesia.

The South American Indian arrow-poison, "Flying Death," has made its way into the armamentarium of the anesthesiologist and promises to hold a prominent and permanent place, but clinical and laboratory investigation must be continued. Curare should not be used to mask a poor anesthetic, but rather to make a good anesthetic better.

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Tropical Medicine

Part IX—Intestinal Protozoa (continued)

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The intestinal protozoa of man are classified under four main heads:

1. Sarcodina (the amebae) See Tropical Medicine, Part VIII.
2. Infusoria (the ciliates).
3. Mastigophora (the flagellates).
4. Sporozoa (Isospora hominis).

2. Infusoria (the Ciliates)

Balantidium coli is the only pathogenic ciliate of man. The name is quite descriptive for it means "little balloon." B. coli is the largest of the pathogenic protozoa. The life cycle consists of two stages, an active trophozoite and a cyst. The trophozoite is broadly oval and measures 50 to 70 micra in longest diameter. Cilia cover the organism in closely set diagonal rows. The cytostome is quite well marked and its entrance is guarded by a group of long cilia. There are two nuclei, a large kidney shaped macronucleus and a small kinetic or micronucleus. The small nucleus usually is set within the hollow of the large. Two large contractile vacuoles, one anterior and one posterior, are seen. The cytoplasm contains many inclusions, food particles, red blood cells, leukocytes, and bacteria. B. coli divides by transverse binary fission. This organism is actively motile; it plows through the semi-liquid feces with a smooth rotary motion.

When conditions become unfavorable the trophozoite rounds up, partly retracts its cilia, secretes a wall around itself, and becomes a cyst. There is no division of the nucleus within the cyst, it is simply a resting stage. The cyst measures 50 to 65 micra.

B. coli inhabits the large bowel and lower ileum. In the trophozoite stage it is a tissue invader; it bores its way in mechanically, using a rotary motion. It produces lesions in the same areas and similar to those produced by E. histolytica. The ulcers are bottle-shaped. Between the ulcers the intestinal mucosa appears normal unless there is a secondary bacterial infection.

Symptoms produced by B. coli vary greatly from a mild, chronic diarrhea to a fulminating, acute dysentery. Dysenteric stools consist chiefly of mucus and blood. Dysentery, dehydration, and hemorrhage are serious symptoms and account in part for the mortality, which may reach as high as 30 per cent. The organism may penetrate the bowel and cause peritonitis.

B. coli is primarily a parasite of the pig. It produces no serious lesions in swine. In the monkey this organism invades tissue and produces lesions similar to those found in man.

B. coli enteritis is quite common in the tropics. In many unsanitated regions man and pig live under the same roof. With the source of the infection so close and with gross contamination of water and food, it is a wonder there is not more B. coli enteritis.

The diagnosis is made by finding either the trophozoite or cyst in the stool. The organism can be cultivated on special media.

Treatments: This is similar to that used for amebic enteritis. Carbarsone is the drug of choice. At least two courses of treatment should be given. If there is extensive secondary bacterial infection the specific treatment should be followed by sulfonamide therapy.

3. Mastigophora (the Flagellates)

Three flagellates commonly infect the intestine of man, Giardia lamblia, Chilomastix mesnili, and Trichomonas hominis. Of these only G. lamblia is a possible pathogen.

G. lamblia has a trophozoite and a cyst stage in its life cycle. In man this organism lives in the upper part of the small intestine where it multiples abundantly. It has been found in the stomach and in the biliary system.

G. lamblia trophozoite is pyriform in shape and measures 9 to 21 micra. It is bilaterally symmetrical and has two nuclei which look like great eyes in the anterior expanded portion of the organism. It possesses 8 flagella, (4 anterior, 2 posterior, and 2 ventral). It is concavoconvex. The underside has a shallow cup-like excavation for vacuum attachment to the wall of the small bowel. Multiplication takes place rapidly by longitudinal binary fission with the production of trillions of organisms. As the organisms are carried into the large bowel with the fecal contents, some of them encyst. The cyst is oval with a definite wall and measures 8 to 19 micra. The immature cyst has two nuceli, the mature cyst four. Four parallel threads can be seen also, these are the retracted flagella.

G. lamblia is a common infection of children especially in orphanages and other public institutions. After adolesence its instance drops sharply.

G. lamblia probably is a mild pathogen. It causes an intermittent diarrhea with flatulence and distention. In the biliary tract it produces symptoms of chronic catarrhal cholecystitis. In children, when these organisms are present in large numbers, they may cover the lining of the small bowel like a fine mosaic interfering with absorption and nutrition. The diarrhea, too, increases the malnutrition.

Treatments: G. Lamblia responds well to atabrine. The dose is 0.1 gm. three times daily by mouth for 5 to 7 days. It may be necessary to repeat this course of treatment two or more times.

Chilomastrix mesnili

C. mesnili, although found in the intestine of man, produces no symptoms. Trophozoite and cyst forms make up the life cycle.

The trophozoite is pyriform in shape, measuring 6 to 24 micra, with a single nucleus at the anterior end. The cytostome ends in a spiral groove which curves across the organism. There are four flagella, three anterior and one in the cytostome. It progresses in a spiral fashion, the fleshy part forward.

The cyst is lemon shaped and measures 6 to 10 micra.

Trichomonas hominis

Three species of trichomonas infect man: T. hominis is found in the intestine, T. vaginalis is pathogenic and is found in the vagina especially of children, and T. buccalis is found in the margin of the gums and is not pathogenic.

Only the trophozoite form of T. hominis is known. It is heart-shaped and measures 8 to 15 micra. It has three to five flagella anterior and one posterior. An undulating membrane extends the full length of the organism.

4. Sporozoa (Isospora hominis)

Although Isospora hominis has a complicated life cycle, only the cyst has been found in the feces of man. Complete life cycles have been worked out for similar organisms in lower animals.

The cyst of I. hominis is elongate, measuring 20 to 33 micra. It is surrounded by a transparent double walled membrane and contains a single spherical body, the fertilized egg.

I. hominis is a definite pathogen. It produces an uncontrollable mucous diarrhea which contains many cysts. The diarrhea decreases gradually and ends in a spontaneous cure in 6 to 10 days.

This parasite is fairly common in China, the South Pacific Islands, and other tropical regions. Several cases have been reported in the United States. The condition is self-limited and there is no treatment.

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Current Publications of Medical Women

ALEXANDER, HATTIE E., M.D.,, Leidy, G., and MacPherson, Catherine:

Production of Types A, B, C, D, E, and F, H. influenzae antibody for diagnostic and therapeutic purposes.

J. Immunol. *54:* 207-211, Oct., 1946.

(Investigations aided by Commission on Influenza, Board for the Investigation and Control of Influenza and other Epidemic Diseases in the Army, Preventive Medicine Service, Office of the Surgeon General, United States Army, and also in part by the Commonwealth Fund).

The authors describe their technique and state that the procedures used for type b H. influenzae antibody—production are satisfactory for making type-specific antibody for the other five types. The determination of agglutinin-nitrogen for measuring type b antibody-content appears to be applicable to the other five types of H. influenzae antisera. Additional study is required to determine whether the variation in total antibody produced against the different types in comparable numbers of rabbits is due to the particular strain of types used or is related to inherent characteristics of the types. Two tables. Seven references.

Burrows, Harold, Ph.D., and HOCH-LIGETI, CORNELIA, M.D.:

Effect of progesterone on the development of mammary cancer in C3H mice.

Cancer Research *6:* 608-609, Nov., 1946.

(From the Chester Beatty Research Institute, The Royal Cancer Hospital (Free), London).

Thirty mice of a high mammary cancer strain (C_3H) received subcutaneous injections of 1 mgm. of progesterone weekly. No difference could be established in the frequency and the age of the appearance of tumors in these mice and in the 20 control animals receiving injections of the solvent only. Two tables. Five references.

DESPERT, J. LOUISE, M.D., and Pierce, Helen Oexle:

The relation of emotional adjustment to intellectual function. Genetic Psychol.

Monographs *34:* 3-36, Aug., 1946.

(From the New York Hospital and the Department of Psychiatry, Cornell University Medical College).

Personality studies of normal children in progress since 1937 at the Payne Whitney Nursery School, include records of anamnestic data, physical examination reports, psychometric test findings, daily behavior records, and individual play sessions. The present study attempts to establish whether any relation can be found between intellectual function as measured by means of psychometric tests, and emotional adjustment as evaluated through the total data. The trends of emotional adjustment were formulated independently of the findings of the psychometric tests. Intellectual function as measured through psychometric tests in this study shows fluctuations, and the child's total emotional adjustment influences his test score. This study points to the need for a projective technic in addition to the usual methods of psychometric testing, as a means of detecting factors inhibiting the intellectual function.

No hypothesis has been formulated regarding the inhibition of the intellectual function through emotional causes. Tables; 45 references.

DE SOLA POOL, NAOMI, M.D.:

Hypertension due to perirenal constriction. Case report. J. Mount Sinai Hosp. *13:* 188-192, Nov.-Dec., 1946.

(From the Laboratories of the Mount Sinai Hospital, New York, Division of Pathology. Presented at the meeting of the New York Pathological Society, Nov. 29, 1945. Dr. de Sola Pool is a Theodore Escherich Fellow.)

This case of an eleven year old boy is reported because it illustrates the mechanism of renal ischemia as the cause of hypertension. The patient had been treated in the clinic for obesity and later was operated on for an enlarged tonsil. Lymphosarcoma had been diagnosed at the time of this operation. The blood pressure had been normal. Three months later because of sudden illness, a second operation was performed. The blood pressure at this time was 150 systolic and 100 diastolic. At this second operation the left kidney was found to be completely enveloped by tumor. Microscopic examination showed extensive infiltration of all retroperitoneal tissue with lymphosarcoma. Twelve references; 4 figures.

EVANS, MARY, M.D., and Smith, G. S., M.D.:

Stillbirth and neonatal death: a clinico-pathological study. J. Obst. & Gynaec. Brit. Emp., *53:* 440-425, Oct., 1946.

This paper is based on 327 autopsies on fetuses and infants delivered in the maternity department of Crumpsall Hospital, Manchester, and on 46 autopsies on infants in the neonatal group at Booth Hall Hospital for Sick Children, Manchester, and correlated with observations on the mode of delivery and any relevant maternal conditions. The importance of prematurity in relation to many of the deaths is stressed and also the role of infection in premature infants. The value of episiotomy is noted and its extended use for the prevention of stillbirth and neonatal death is suggested. Erythroblastosis foetalis is discussed and a routine suggested for diagnosis and treatment. There are ten tables, showing the causes of death and the circumstances of delivery, the type of labor in comparison with the cause of death, etc. Thirteen references.

HARRIS, RUTH C., M.D., Buxbaum, L., and Applebaum, E., M.D.:

Secondary bacillus pyocyaneus infection in meningitis following intrathecal penicillin therapy. J. Lab. & Clin. Med. *31:* 1113-1120, Oct., 1946.

(From the Willard Parker Hospital, Department of Hospitals, and the Bureau of Laboratories, Health Department. Dr. Harris was former Chief Resident, Willard Parker Hospital).

Four cases of secondary B. pyocyaneus meningitis following intrathecal penicillin treatment for pneumococcus meningitis are described. Two of the patients died. The source of the B. pyocyaneus was traced in two of the cases to penicillin solutions contaminated by syringes used to withdraw the drug for injection. As penicillin solutions containing 5,000 units per cc. show no evidence of contamination, absolutely sterile technique in the preparation and administration of penicillin must be observed. Eight references; 3 graphs.

HENNING, ELIZABETH, M.D.:

Stuttering. Report of a case. Jackson Clinic. Bull. 8; 198, Nov., 1946.

Case in which stuttering in a child was relieved by discovering the cause of the child's anxiety.

JONES, GEORGEANNA SEEGAR, M.D., and Everett, H. S., M.D.:

Arrhenoblastoma of the ovary with a report of two cases. Am. J. Obst. & Gynec., *52:* 614-622, Oct., 1946.

(From the Department of Gynecology of the Johns Hopkins University and Hospital).

Two cases of arrhenoblastoma of the ovary both of which occurred in relatively young women in the right ovary are reported. One was associated with rather marked virilism and microscopically was of the intermediate cell type. The other associated with only slight masculinization was microscopically highly differentiated and resembled a tubular adenoma of Pick. The 17-ketosteroid excretion was studied in one case and proved to be elevated preoperatively, falling to normal within 12 days postoperatively. No pregnanediol was present in the urine in this case. A simple salpingo-oophorectomy was preformed in one case, and the patient is well one year postoperatively with some regression of masculinization and regular menses. The other patient had a bilateral salpingo-oophorectomy and hysterectomy, and is well six months postoperatively. One table, 7 figures. References.

LA ROE, ELSE K. M.D.:

Evaluation of common procedures in mammaplasty and a new theory. Am. J. Surg., *72:* 641-655, Nov., 1946.

The author discusses satisfactory and unsatisfactory techniques which have been used in mammaplasty. She believes a two or more stage mammaplasty is often contraindicated for psychologic, economic, and possibly esthetic reasons. She concludes that mammaplasty with free transplantation of the nipple and areola during sex maturity is contraindicated and may be considered only after menopause. Mammectomy with free transplantation of nipple and areola is a simple and safe surgical procedure in true hypertrophy and in enormous adiposity of breasts.

LA ROE, ELSE K., M.D.:

Cancer education. M. Rec., *159:* 674-676, Nov., 1946.

Dr. La Roe gives the case history of a 45 year old school teacher who consulted her general practitioner because of a small hard lump in the left axilla. The general practitioner treated this with infra-red rays assuring patient that lump was not significant. As condition became worse and her physician still continued to assure patient that manifestations were menopausal, she decided to consult a specialist but went first to a numerologist, to be sure the signs were right. The numerologist sent her to a spiritualist. She continued under astrological-numerological, Haye diet treatments for four months during which time her condition became very much worse and she suffered excruciating pain. At the end of this time when she consulted Dr. La Roe, an adenocarcinoma (inoperable) was diagnosed. The patient died six weeks later of cachexia and cerebral metastasis. The author makes a plea for educating the educated as to cancer.

MARCHETTI, A. A., M.D., KUDER, KATHERINE, M.D., and KUDER, ALBERTA, M.D.:

A clinical evaluation of ectopic pregnancy. Am. J. Obst. & Gynec., *52:* 544-555, Oct., 1946.

(From the Department of Obstetrics and Gynecology, Cornell University Medical College, and the New York Hospital).

Among 41,365 pregnancies in the Woman's Clinic of the New York Hospital there were 141 ectopic pregnancies, an incidence of 0.34 per cent, or 1 in 293 pregnancies. Ectopic gestation occurred most frequently in the age group ranging from 25 to 35 years. This incidence and age group agree with current statistics. Of these 141 cases, the diagnosis was made preoperatively in 124 cases (87.8 per cent). In a total of 219 patients in whom a diagnosis of ectopic pregnancy was entertained, the condition was found in 124 instances (56.6 per cent). The treatment is discussed and statistics are given relative to the time of operation. Eight tables, references.

RALLI, ELAINE P., M.D.:

Factors affecting survival in adrenalectomized rats. Endocrinology, *39:* 225-233, Oct., 1946.

(From the Laboratories of the Department of Medicine, New York University College of Medicine). Research aided by a grant from the Josiah Macy, Jr. Foundation.

This report is concerned with the comparative effects of adrenal cortical extract, desoxy-corticosterone acetate, and calcium pantothenate, with or without 1 per cent sodium chloride solution, on the survival of adrenalectomized black rats. Without sodium chloride, survival regardless of hormone administration or dietary supplement was sharply curtailed. When 1 per cent sodium chloride was given the addition of calcium pantothenate to the diet resulted in a remarkably long period of survival, 50 per cent of the animals surviving 150 days. The survival with calcium pantothenate and sodium chloride was longer than was obtained when rats received hormone therapy plus sodium chloride and the deficient diet. The importance of sodium chloride to the survival of the pantothenic acid treated adrenalectomized rat was shown by the fact that the withdrawal of salt resulted in death. Two tables; 4 graphs. References.

ROSE, ELIZABETH KIRK, M.D., György, P., M.D., and Ingraham, N. R., Jr., M.D.:

Penicillin in the treatment of the syphilitic infant. A progress report. J. Pediat., *29:* 567-584, Nov., 1946.

(From the Department of Pediatrics and the Institute for the Control of Syphilis of the University of Pennsylvania School of Medicine. The work described in this paper was done under a contract recommended by the Committee on Medical Research between the Office of Scientific Research and Development and the University of Pennsylvania).

Thirty-six infants with congenital syphilis were

treated with intramuscular penicillin in dosages ranging from 11,000 to 75,000 units per pound of body weight, over periods of seven to fifteen days. Nineteen have become clinically well and seronegative; six have been clinically well but have remained seropositive. Seven died and four have been treated too recently to evaluate results. There was one case of clinical relapse but no case of serologic relapse.

The authors discuss in detail their method, the results of treatment, and the reactions to treatment. This data is summarized in detail in one long table and in 2 shorter tables. Although the authors make recommendations as to dosage they state that the optimum time dosage relationship has still to be worked out.

Sharkey, J. A., M.D., and Hess, Catherine B., M.D.:

The effect of essential hypertension of pregnancy. Am. J. Obst. & Gynec., *52:* 672-676, Oct., 1946.

(From the Department of Obstetrics and Gynecology, the University of Pennsylvania, School of Medicine).

In a series of 3,000 patients delivered consecutively in the Hospital of the University of Pennsylvania there were 115 women who showed essential hypertension, as indicated by the fact that their blood pressures were 140/90 or higher on two or more prenatal visits. These patients were followed regularly throughout their pregnancies, with observations being made as to the onset of any new symptoms and the ranges of their blood pressures. The type of labor and delivery was noted in each case with particular reference to the condition of the infant at birth. A six week' postpartum examination was made on 90 of the 115 women. The authors conclude that pregnancy aggravates the hypertensive state both in parous and nulliparous individuals but that the existence of hypertension itself is not sufficient reason for terminating the pregnancy. The fetal death rate is not increased in the presence of essential hypertension. Three tables. References.

Stokes, J., M.D., Enders, J. F., Ph.D., Maris, Elizabeth P., M.D., and Kane, L. W., M.D.:

Immunity in Mumps. VI. Experiments on the Vaccination of human beings with formolized mumps virus. J. Exper. Med., *84:* 407-428, Nov., 1946.

(Investigations carried out as a project of the Commission on Measles and Mumps, Army Epidemiological Board, Preventive Medicine Service, Office of the Surgeon General, U. S. Army, Washington, D. C.).

The results observed after experimental inoculation of active mumps virus into 41 vaccinated and 32 unvaccinated children—with the consent of their parents or guardians—indicated that formol-inactivated mumps virus obtained from the parotid gland of the infected monkey and employed as a vaccine in the manner which has been described increased the resistance of about half of those to whom it was administered. Eight references; eight tables.

Thelen, Christine, M.D.:

Face presentation. Report of a case. Jackson Clinic Bull., *8:* 183-187, Nov., 1946.

Wade, L. J., M.D., Czebrinski, E. W., M.D., and and Wood, Genevieve, M.D.:

Recent observations on anemia in scurvy. J. Missouri M. A., *43:* 756-762, Nov., 1946.

(From the Department of Medicine and Preventive Medicine, Washington University School of Medicine, and the St. Louis City Hospital). Presented at the 88th Annual Session of the Missouri State Medical Association, March 24, 25, 26, 1946, St. Louis.

Four cases of anemia in scurvy which responded to ascorbic acid treatment are described. The authors conclude that chronic vitamin C deficiency alone, or in combination with other deficiencies, such as of iron or erythrocyte maturing factor, may produce anemia which will not respond optimally until adequate ascorbic acid therapy is instituted. In the presence of obvious clinical scurvy, it is probably unnecessary to resort to iron or liver therapy until one has observed the hematologic response to ascorbic acid. Refractory anemias deserve a trial on ascorbic acid therapy if there is any reasonable suspicion of vitamin C deficiency. Four tables; 26 references.

Warren, Marjory W., M.R.C.S., L.R.C.P.:

Geriatrics: A medical, social, and economic problem. Practitioner, *157:* 384-390, Nov., 1946.

(Dr. Warren is Deputy Medical Director, West Middlesex County Hospital, Isleworth).

After a brief historical review of the subject, the author shows the increased age expectancy of life today and points out the inadequacy of existing geriatric services and the need for training. The future needs in the field are outlined and suggestions are offered for large active geriatric departments in hospitals, large numbers of resident homes holding no more than 40 residents, and small long-stay annexes equipped for the different types of cases attached to the geriatric department of the general hospital.

Weinstein, L., and McDonald, Alice, M.D.:

The action of urea and some of its derivatives on bacteria. I. Bacteriostatic and bactericidal effects of urea and urethane. J. Immunol., *54:* 117-144, Oct., 1946.

(From the Evans Memorial, Massachusetts Memorial Hospitals, and the Department of Medicine, Boston University School of Medicine, Boston, Mass.).

Using two carbamates, urea and urethane, the authors studied the action on nine species of bacteria. The technique is described and the results are discussed and tabulated in four tables. It was found that urea and urethane are bacteriostatic and bacteriocidal for a number of gram-negative and gram-positive bacteria, the former being the more susceptible to the action of these compounds. A 2 to 3 per cent concentration of urethane was bacteriostatic for all the gram-negative organisms studied as well as for Streptococcus pyogenes and Diplococcus pneumoniae. In concentrations of 10 per cent, urethane exerted a rapid bacteriocidal effect on all the organisms except Staphylococcus aureus. Twenty per cent urea was not as rapidly lethal as 10 per cent urethane (ethyl carbamate). Serum increases the antibacterial activity of the carbamate compounds. Sixteen references.

Wilson, May G., M.D.:

The diagnosis of rheumatic fever in children. New York Med., *2:* 21-22 and 46, Nov. 5, 1946.

(From the New York Hospital and the Department of Pediatrics, Cornell University Medical College, New York City).

Brief discussion of history, symptomatology, and major and minor manifestations in rheumatic fever. Six references.

BY ALICE BARTLETT
AND CARROLL BIRCH

A Medical C

1 1765. The establishment of the first lying-in hospital in America was advertised in the *Pennsylvania Gazette* by William Shippen.

1847. J. Mac Donell administered rectified sulfuric ether to a girl and amputated her arm while she was perfectly insensible to pain. He confessed himself "sauguine respecting the safety, the great utility, and manageableness of this singular agent."

2 1492. The "Most Catholic Kings" Ferdinand and Isabella founded a hospital for the insane at Granada, Spain.

3 1841. Father Joseph Damien, a Belgian Priest born in 1841, devoted his life to the spiritual guidance and physical comfort of the lepers on Molakai. Although he developed leprosy, he continued his heroic labors unabated until his death in 1889.

4 1855. Florence Nightingale wrote from the Crimea to Sir Sidney Herbert, Secretary of War, saying, "I am a kind of a dealer in socks, shirts, knives and forks, wooden spoons, tin baths, tables and forms, cabbages and carrots, operating tables, soap, fine-tooth combs, percipitate for destroying lice, scissors, bed pans and stump pillows."

5 1719. The Dionne family was not a medical first. In 1719 the wife of a Dutch fisherman presented him with five baby girls.

1898. Rush Medical College and the University of Chicago were affiliated in 1898.

6 1725. Guy's Hospital opened in 1725.

1896. Jastrowitz showed the first Roentgen ray pictures at a meeting of the Verein fuer Innere Medicine, Berlin.

7 1885. Sir William Osler was elected a Fellow of the College of Physicians of Philadelphia.

8 1915. The Chicago Society of Internal Medicine was organized with the avowed purpose of cultivating the theory and practice of Medicine with special reference to Internal Medicine.

9 1776. Dr. Thomas Bond, Dr. Cadwallader, Dr. Richard Rush, and Dr. William Shippen, Jr., were appointed as the examining surgeons of the Colonial Medical Department.

10 1832. Dr. Hodgkin's paper "On Some Morbid Appearances of the Absorbent Glands and Spleen" was presented by Dr. R. Lee in London.

11 1818. The Medical Society of New Orleans held its first public sitting on Sunday in the City Council room.

1922. At Toronto General Hospital the first patients were treated with pancreatic extract.

12 1831. The Managers of the Pennsylvania Hospital passed the following: "Resolved, that the twenty-five-foot street intended to be laid in the preceding resolution, shall be named Bond Street in grateful recollection of the early, long, and faithful services of Drs. Thomas and Phineas Bond, as physicians to this institution."

13 1825. Edmund Burke Haywood was born in Raleigh, North Carolina. He was one of the great physicians of his time and the author of "The Physician, His Relation to the Community and the Law."

14 1794. The first successful Cesarean section in America was performed by Dr. Jesse Bennett, a county practitioner in the Valley of Virginia.

1474. Germain Colot, a famous French Surgeon, performed for the first time the removal of stones from the bladder in the presence of King Louis XI of France. This was done at the cemetery of St. Severin on a criminal under the death sentence, who offered his life and which if successful he would be freed. The Colot family kept the method used secret for many years.

15 1844. The opening lecture of the Faculty of Medicine of King's College was delivered by Dr. Herrick. The first medical class comprised only two matriculated students.

Calendar FOR JANUARY

1848. The first telegram was received in Chicago from Milwaukee. It read: "Milwaukee with her 14,000 sends to Chicago with her 17,000 greetings." The operator was Ambrose Jones, a senior student in Rush Medical College.

16 1896. The first x-ray photograph in England was taken by Mr. A. A. Campbel Swinton, an electrical engineer, of his own hand, with an exposure of 20 minutes.

17 1374. Visconte Bernabo of Reggio, near Modena, promulgated a decree against the introduction and spreading of the plague. He thus became the founder of systématic quarantine in the sense we generally understand it at present.

18 Happy Birthday to Dr. Anna E. Blount, ninth President of the American Medical Women's Association—1925-1926.

19 1847. Sir James Young Simpson used ether in midwifery practice for the first time in Great Britain.

20 1812. Edouard Seguin, an American Physician, was born. He devoted himself to the study of idiocy and the training of idiots and the insane. He invente da physiological thermometer.

21 1677-8. The earliest pediatric publication in America is the well known "Brief Rule to guide the Common People of New England how to order themselves and theirs in the Small-pox and Measles." It is a broadside twelve by seventeen inches in size and was written by Reverend Thomas Thacker, who was the first minister of the "Old South" Church. It was printed by John Foster of Boston.

22 1870. Emil Scheffer, an American chemist, was born. He discovered the formulae for making liquid and powdered pepsin.

23 1849. Dr. Elizabeth Blackwell, the first woman to receive an M.D. in the United States, graduated from medical school in Geneva, New York.

1896. The first regular report of this discovery was made by Roentgen at a physics meeting in Wuerzburg.

24 1847. Chloroform was first used as an anaesthetic.

1806. The physicians of Boston met at Vilas for the purpose of considering the adoption of a uniform fee table.

25 1796. Vaccination against smallpox was discovered by Jenner.

1813. Dr. Marion Sims was born in Lancaster, South Carolina.

26 1347. Pope Clement VI founded the University of Prag. It was the first German University.

1832. Dr. Rufus Henry Gilbert was born. He was instrumental in the erection of the first elevated railroad in New York City.

27 1857. Skull of Neanderthal man discovered in the Neander Valley, near Dusseldorf. It represents the oldest and most primitive of all human beings.

28 1725. Peter the Great of Russia died. He was keenly interested in medicine and frequently carried a medical kit and performed minor operations upon his subjects. Occasionally they were successful.

1860. Frederick Albert von Zenker of Erlanger, Germany, first found a trichina in a post-mortem and thus laid the foundation for the study of trichinosis.

29 1881. Alice Evans, the discoverer of Undulant Fever, was born.

1909. The Tri-State Medical Society (Washington, Oregon, and Idaho) was organized.

30 1854. The New York Infirmary for Women and Children was organized.

31 1837. The poor-law medical service was passed in England.

BOOK REVIEWS

PRACTICAL MALARIOLOGY: Prepared under the Auspices of the Divn. of Medical Sciences of the National Research Council. Paul F. Russell, M.D., M.P.H., Colonel, M.C., A.U.S., Parasitology Divn., Army Med. Sch. Field Staff, Internl. Health Divn., Rockefeller Foundation (on leave); Luther S. West, Ph.D., Head of Biology Dept., Northern Michigan College of Education. Major, Sn.C., A.U.S. (Reserve); Formerly Entomologist, Parasitology Division, Army Medical School; Reginald D. Manwell, Sc.D., Professor of Zoology, Syracuse University, New York. Formerly Captain, Sn.C., A.U.S., Protozoology Section, Parasitology Division, Army Medical School. Foreword by Raymond B. Fosdick, President of The Rockefeller Foundation. 684 pages, 238 illustrations, 8 in color. Philadelphia & London: W. B. Saunders Company, 1946. Price $8.00.

This is a manual which brings together in concise terms a wealth of information concerning principally the public health aspects of malaria.

The authors, from personal experience particularly during World War II, have been able to present in this volume accumulated data which led to the progressively more successful campaigns against this disease. The chapters dealing with the mosquito, the community, prophylaxis, and control are detailed with advances in field technique. It appears advantageous that, in addition to the detailed text, there are many actual photographs and schematic drawings to illustrate methods and the use and construction of equipment for the destruction of the adult and larval stages of the mosquitoes of the world. Although the segment of this book that deals particularly with the clinical and pathological aspects of the disease seems somewhat limited in scope, nevertheless the volume should be of great benefit to those charged with the control of malaria in the many persistent endemic areas of the world.

—Sophie Spitz, M.D.

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A PRIMER FOR DIABETIC PATIENTS: An Outline of Treatment for Diabetes with Diet, Insulin and Protamine-Zinc Insulin, Including Directions and Charts for the Use of Physicians in Planning Diet Prescriptions; by Russell M. Wilder, M.D., Ph.D., F.A.C.P., Professor and Chief of the Department of Medicine of the Mayo Foundation, University of Minnesota; Senior Consultant in Division of Medicine, Mayo Clinic. Eighth Edition, Reset. 192 pages, with 8 illustrations. Philadelphia and London: W. B. Saunders Company, 1946. Price $1.75.

The seventh edition of this primer was published in 1941, and although, as the author states in his preface to the new edition, there have been no major changes in the method of treatment of diabetes at the Mayo Clinic in the intervening years, in his opinion minor alterations in procedure justify the revision.

Some sections of the book are written for physicians. The greater part of it, however, is devoted to information and instructions for the diabetic patient, and is written in clear and concise language which the average patient can readily grasp and understand.

The first chapter gives the patient a definition of diabetes and what can be expected from proper treatment. Chapter two gives implicit instructions for testing of urine for sugar and diacetic acid. The third chapter deals with the various insulin preparations, minute directions for injection, directions for the physician for adjusting dosage, and information to the patient on insulin reaction and its treatment. Chapters four and five deal at some length with the complications of diabetes, how to avoid some of them, and treatment of those which do occur. The last four chapters give a wealth of information on diet, menus, recipes, food facts, and food tables.

This is an excellent book for both physician and diabetic patient.

—Lillian DeMuth, M.D.

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DISEASES OF THE ADRENALS. Louis J. Soffer, M.D. Adjunct Attending Physician, Mount Sinai Hospital, N.Y.C., 304 pages, 42 illustrations. $5.50. Lee & Febiger, Philadelphia.

Since the monumental work of Addison, great strides have been made in the understanding of the role played by the adrenal glands in the body economy.

This most recent book on the diseases of the adrenals gives a historical review of the subject and bring up to date the mass of clinical observations and precise laboratory tests now employed in the diagnosis of suspected adrenal disease.

Of special interest is the elucidation of the role played by the adrenals in carbohydrate metabolism and in the physical and psychological changes produced in individuals afflicted with adrenal tumors,

especially in instances of masculinization and feminization.

There is a detailed chapter on the various hormones of the adrenal cortex and their functions as well as description of methods of quantitative and qualitative analysis of urinary excretion of 17 ketosteroids.

A good part of the book is devoted to Addison's disease; its early diagnosis and treatment. The chronic phase and the avoidance and treatment of the crises of Addison's disease.

There is a discussion of the close interdependence between all the glands of internal secretion; special emphasis is placed on the adrenal glands, because without them the organism cannot survive.

This book is most helpful to the clinician and especially to the endocrinologist.

—Rita S. Finkler, M.D.

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JEWISH LUMINARIES IN MEDICAL HISTORY AND A CATALOGUE OF WORKS BEARING ON THE SUBJECT OF THE JEWS AND MEDICINE FROM (HIS) PRIVATE LIBRARY: Harry Friedenwald, M.D., Professor Emeritus of Ophthalmolgy, University of Maryland. 199 pages. $3.00. 1946. Johns Hopkins Press. Baltimore.

This volume of 196 pages is chiefly a reference catalogue of all books and references pertaining to the subject of the role played by Jewish scientists and their contributions to medicine through the ages.

The numerous references (over 890) are prefaced by a reprint of an address delivered at the Johns Hopkins University by the author on February 10, 1943. In this address the author gives the highlights of the subject, starting with the hygienic and dietary laws and the care of the sick as gleaned from the Talmud, and the Old and the New Testaments. Of special iinportance are the detailed instructions in the diagnosis, treatment, and isolation of the lepers and the recognition of contagious disease by the ancient Hebrews and strict injunctions as to the isolation of the sick. This early medical knowledge greatly influenced Arabic medical literature and later medieval medical writings of Italy, Spain, and England.

Of the Italian Hebrew medical authors the most famous was Donnolo, born about the year 913. Another scholar, Isaac, born in Egypt at about the year 850, became distinguished as an oculist and later wrote many famous medical and philosophical works; the one on "Fever" was translated into many languages and included in medical libraries throughout the world for many centuries after.

Another famous physician, Maimonides, was born in Spain in 1135 of a family of scholars; his family was forced to flee because of persecution of Jews in Spain and after many wanderings he settled in Egypt, where he became court physician and wrote many Treatises, which are still considered as classics.

Another important medical author was Villalobas, born in Spain; his most important writings were on Bubonic Plague and Syphilis, published in the year 1489. And so through the centuries numerous distinguished Hebrew physicians and authors continued to contribute towards the progress of medicine. This particular book brings the list up to Paul Ehrlich, whose researches revolutionized our knowledge in hematology, and who in 1910 announced his great discovery of the treatment of syphilis with salvarsan.

—Rita S. Finkler, M.D.

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PROFESSIONAL ADJUSTMENTS by Sister Mary Isidore Lennon, R.S.M., R.N., B.S., M.A., Director of St. John's Hospital School of Nursing 1939-1945; Director of Social Service Department, St. John's Hospital, St. Louis. Pp. 299 with illustrations. St. Louis: The C. V. Mosby Company, 1946. Foreword by Rev. Raphael C. McCarthy, S. J. Regent, St. Louis University School of Nursing. Price $3.00.

The author seeks to impress the student nurse with the important role which spiritual guidance can mean to her in caring for the sick.

The helpful suggestions pertaining to character development and ethical practices should assist the student during the transition from a lay person to a professional nurse.

Simplicity and good sound common sense prevail throughout the book.

—Anne F. Finn, R.N.

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PROBLEMS IN ABNORMAL BEHAVIOR: Nathaniel Thornton. The Blakiston Company. Philadelphia, Toronto. 1946. 244 pages. Price $2.00

The book is simply written. To the average student of Freudian psychology it may appear to be oversimplified. For teaching purposes or for those who know little of the field, the chapter on mental mechanisms will be helpful.

There is nothing new in this book, but yet its very simplicity of style and terminology recommends it for libraries and lay teaching. It is not a "must" in reading, but will serve a useful purpose to those interested in the field of abnormal behavior.

—Lydia G. Giberson, M.D.

Opportunities for Medical Women

THE STUDENT HEALTH SERVICE

Florence Mahoney, M.D.

Student health work had its beginning as early as 1856, when Amherst College organized a student health program and built a new building to care for the sick.

At first, student health was chiefly concerned with physical exercise and campus sanitation, medical supervision of athletes, etc. Medical inspection of all students became the rule as college physicians began to find a surprising number of defects in apparently normal healthy boys out for teams. As modern public health concepts developed, the college became interested in sanitary conditions, control of communicable diseases, improvement of living quarters, and other health problems of the campus. Now, the more complete health service programs include the following:

1. Health examinations of entering students, periodic health check-ups of other students, health inspections of participants in physical activities.
2. Follow-up of physical defects.
3. Medical care of minor illnesses and injuries in the dispensary.
4. Hospital or infirmary care of actually ill patients.
5. Medical advice on health problems, such as mental, sex, marital, vocational.
6. Medical and nursing care in rooming-houses and dormitories.
7. Public health protection against cases and carriers of epidemic diseases.
8. Sanitary inspection of the campus environment.

How many of these activities are supervised by the Director of the Health Service depends on the size of the school, the interest of the physician and the size of his budget and staff in relation to the job to be done. An interesting study was made of the "Health of College Students" by Diehl and Shepard in 1939[1] and reported to the American Youth Commission. Any one interested in Student Health should read this little volume.

The American Student Health Association was organized in 1920. A study of the annual proceedings[2] will show how student health work has grown in scope in the colleges interested in such a program, what medical and public health problems concern college physicians, both old and new. These proceedings have been published annually since a few years after the organization of the national group and will be found at any member institution. Each year papers and committee reports on the problems concerning every one in the field are presented at the annual meeting and printed in the proceedings. The topics usually emphasized are: Tuberculosis, eye health, ear health, mental health, health instruction, administration, health service and physical activities, epidemic control, new drugs and their use, and problems current to the times. Institutions rather than individuals must join the organization and two copies of the proceedings are sent to each college or university belonging to the American Student Health Association. The Journal Lancet is the official journal which publishes these papers, also.

In the large universities the health services are on a par with a small town hospital in many ways, having a director to handle the administrative work and a staff of physicians who practice medicine in the health service on a salary. The smaller colleges may have only one resident physician or even a small-time local physician to carry on the program with the help of a nurse or two. Some of the colleges assign health instructions to the college physician as well as his duties as physician to the students.

Student health work, then, is the practice of medicine and public health in a college situation. It can be very interesting and stimulating and often presents, during the course of a year, most of the medical problems found in that age group. The physicians are on salary and most of their work is in the daytime hours, with vacations, retirement, insurance, and often faculty ranking on a par with other members of the college staff. Physicians in this field must be interested in young people and their problems and in education as well as medicine, for the college doctor must work closely with the administrators, the physical education department, and the student's advisors and teachers.

There are many openings in this field for women, both in women's colleges, as the sole physician in a small college, and on a staff with several physicians in a larger college. There are also openings in co-educational institutions on the staff with men physicians, and for a few as medical directors for women in larger universities.

(1) Diehl, H. S. and Shepard, C. E. The Health of College Students; American Council on Education, Washington, D. C., 1939.

(2) Proceedings of the Annual Meeting of the American Student Health Association, Published each year by the Journal Lancet, Minneapolis, Minn.

Medical School News

Edited by EVA F. DODGE, M.D.

News items and announcements of interest to women medical students and interns will be welcomed by Dr. Dodge, University of Arkansas School of Medicine, Little Rock, Arkansas.

* * *

News items were scarce this month. If you enjoy reading of the activities of other women medical students, please send items from your school. Or if you would like to have items which have not been included, let the Editor of this section know what you want to have reported. This is your section, and we are only too happy to publish what you will enjoy. All news items should reach the Editor not later than the first of the month preceding publication.

* * *

University of Alabama Medical College

Women medical students now enrolled in the Medical College include three seniors, ten sophomores, and five freshmen. Because of the wartime schedule adopted by the College, there is no junior class this year.

* * *

University of Arkansas

There are fourteen women students in the Medical School this year; four in the freshman class, five in the sophomore class, four juniors, and one senior.

One of the juniors, RUTH ELLIS, has the distinction of being the third generation of her family in medicine. Her grandfather, Dr. E. L. Ellis, graduated in 1885 from the then Missouri Medical College at St. Louis, now Washington University School of Medicine. He is still active in general practice at Fayetteville, Arkansas. His daughter, Ruth Ellis Lesh, graduated from the Woman's Medical College of Pennsylvania in 1933, with high honors, and is now in practice with her father and her husband. It looks as though Fayetteville would have another Dr. Ellis when "Little Ruth" gets her M.D.

* * *

University of Texas Medical School

A note telling how much the women medical students at the University of Texas appreciate the JOURNAL was received, along with a note concerning the freshmen in the school.

The ten neophytes have struggled through the first month of medical work and are still managing to come up smiling from bouts with their cadavers, a condition which their upper-class "helpmates" are piously hoping will endure.

Although these freshmen have a varied assortment of pre-medical backgrounds, from doctor's wife to technician, the one who has had the most unusual preparation is ANN BRENNAN. She spent two years in the WASPS as a pilot, ferrying all types of army planes all over the country.

* * *

Western Reserve University Medical School

A reporter from Cleveland notes that the present enrollment of women in the School of Medicine is 26: three seniors, four juniors, eleven sophomores, and eight freshmen.

BETTY RICE, '48, spent an interesting and instructive summer at the Jackson Memorial Laboratory for cancer research, in Bar Harbor, Maine, of which Dr. Clarence C. Little is director.

PHOEBE HUDSON has been re-elected secretary-treasurer of the junior class.

* * *

University of Colorado Medical School

New students in the Medical School include seven women who entered the freshman class this fall, and one who transferred into the junior class from the Woman's Medical College of Pennsylvania.

* * *

The Woman's Medical College

MISS MARGARET L. OSGOOD has joined the Staff of the Women's Medical College as Administrative Assistant to the President. Miss Osgood, a graduate of Adrian College, has been Assistant Dean of Students at Temple University since April, 1944, and previously served as Assistant Dean of Women at Ohio University. Dr. Marion Fay, Dean of the Women's Medical College, has announced that Miss Osgood will direct an expansion program which will culminate in the institution's centennial celebration in 1950.

On November 21, DR. WILSON G. SMILLIE, Professor of Public Health and Preventive Medicine at Cornell University Medical College, spoke to the Senior Class at the Woman's Medical College on "The Relationship of Epidemiology to the Practice of Medicine." A dinner in Dr. Smillie's honor was held that evening.

DR. M. NOBLE SMITH (Woman's Medical College, 1925) has organized the "Noble Smith Infirmary for Women" in Laconia, New Hampshire, to meet the need for maternity care in that city.

News of Medical Women

Edited by ELIZABETH KITTREDGE, M.D.

Members are urged to send news items and announcements of interest to Dr. Kittredge, 3906 McKinley St., N.W., Washington 15, D. C.

* * *

Dr. Mabelle Gilbert, of Cleveland, is planning to retire after fifty years of an active medical and obstetrical practice during which she delivered 4,000 babies. After graduating from medical school in 1897, Dr. Gilbert practiced in Ashtabula twelve years before going to Cleveland, where she has been in practice for thirty-eight years.

* * *

Dr. Emeline P. Hayward, Consulting Psychiatrist to the United States Employment Service, spoke on "Human Relations and their Bearing on Tuberculosis," at a meeting of the Association for Rehabilitation of the Tuberculous, held in New York, November 7, 1946.

* * *

Dr Catharine Macfarlane has received word that the Medical Women's International Association will hold its general meeting in Amsterdam from June 20 to 30, 1947. The election of new officers will take place at that time.

* * *

Dr. Charlotte Babcock of Chicago addressed the American Dietetics Association in Cincinnati on "Psychological Factors in the Nutrition Interview."

* * *

Dr. Erma A. Smith, Rush Medical College, 1933, has been appointed Resident Physician at the Women's College, Duke University, Durham, N. C. Dr. Smith interned at the Women and Children's Hospital, Chicago, Illinois.

* * *

Dr. Jane Auer of Buffalo is the recipient of a medical fellowship from Mt. Holyoke College, her Alma Mater, for graduate training in surgical pathology and anatomy at Columbia University. Dr. Auer is now a resident in surgery at Mount Sinai Hospital, New York.

Dr. Louise Beamis-Hood has resigned as Secretary of Erie County, New York, Medical Society. She has held this office for nineteen years.

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Dr. Eva M. Wilson, who graduated from the Northwestern University Woman's Medical School in 1893, and who has held the position of resident Health Officer for many years at the Women's Reformatory in Dwight, left her home in Joliet, Illinois, the last of October to make her new home at 87 King Street, Mill Valley, California.

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Dr. Margaret D. Craighill, chief consultant on medical care of women veterans for the Veterans' Administration, has announced the appointment of ten women doctors to serve in a similar capacity in branch offices throughout the country.

They were selected from among the women who served with Dr. Craighill as part of the armed forces during World War II. Their instructions are "to see that medical care for women veterans in VA hospitals and homes over the country is kept at the highest possible standard at all times."

Appointments to branch offices were made as follows: Dr. Margaret Janeway, New York; Dr. Marion C. Loizeaux, Boston; Dr. Jane Liebfried, Philadelphia; Dr. Gertrude R. Holmes, Atlanta, Georgia; Dr. Grace Haskin, Columbus, Ohio; Dr. Angie Connor, Chicago; Dr. Elizabeth D. Fletcher, St. Louis; Dr. Eleanor B. Gutman, Seattle; Dr. Hulda E. Thelander, San Francisco; and Dr. Ruth Bergess, Denver.

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Dr. Grace Martin, of Pittsburgh, returned this past summer to her former post in Shanghai, China, to resume her duties as a medical missionary. At the last meeting of the Pittsburgh group it was decided to send packages to Dr. Martin regularly during the year. At the time she left she took all possible supplies with her, since she was told that practically nothing could be obtained in China, and anything that can be sent will be most welcome.

Award for Eminent Achievement Presented to Dr. Elise L'Esperance

At the 20th Annual Friendship Dinner held in New York City, at the Hotel Commodore on the evening of November 13, 44 women's service organizations honored the recipient of the Annual American Women's Association Award for Eminent Achievement. The 1946 Award winner was Dr. Elise S. L'Esperance, who joined the ranks of such past recipients as Amelia Earhart, Mrs. Ogden Reid, Anne O'Hara McCormick, Carrie Chapman Catt, and others.

Dr. Mary Crawford presented the award on behalf of the participating members. In her introductory remarks, she announced that the Jury of Award had selected Dr. L'Esperance "because of her outstanding attainments as a physician and her peerless quality as a woman."

Dr. L'Esperance was graduated from the Women's Medical College of the New York Infirmary for Women and Children, a college which no longer exists as an institution but which will never pass from the memory of medical women because of what it has given them in their need for education. Dr. Crawford pointed out that "she whom we honor has never ceased to love and serve the Hospital, which still continues its great work in New York City."

Following Dr. L'Esperance's graduation and internship, she devoted her life to medical research. During the years of her training and work, she concentrated more and more on one aspect of pathology—the study of the origin, treatment, and prevention of malignant tumors. She, together with her sister, Miss May Strang, founded the Strang Tumor Clinic of the New York Infirmary, and she became its Director. In 1937, Dr. L'Esperance made her outstanding contribution to medicine and to mankind. She planned and established the first Cancer Prevention Clinic, again at the New York Infirmary, and again, she assumed the arduous work of Director. In 1940, Dr. L'Esperance was invited to found a similar clinic at Memorial Hospital and she is directing that clinic also at the present time. In 1944, she was appointed Assistant Professor in the Department of Preventive Medicine of Cornell University Medical College.

An important and large audience shared in the presentation of the award. Miss Pauline Mandigo presided. Other speakers included: Mrs. George Fielding Eliot, General John Reed Kilpatrick, and Mrs. Vijaylakshmi Pandit, Chief Delegate for India to the United Nations General Assembly. The theme of the evening's program was: "Woman's Contribution to the Achievement of a Unified Peace."

In accepting the A.W.A. Award, Dr. L'Esperance said: "It is with a profound sense of humility that I acknowledge the honor you have bestowed upon me as the representative of medical women. I realize that by this gesture you have recognized the attainments of women in the broad field of medicine. Personally, I have no particular title to it, yet I rejoice to possess it as a tribute to my fellow colleagues."

Dr. L'Esperance attributed a large measure of the early success of the Cancer Prevention Clinics to the splendid and enthusiastic cooperation of her colleagues, Dr. Isabel Knowlton, Dr. Isabel Scharnagel, Dr. Martha Howe, Dr. Harriet McIntosh, and Dr. Sophie Spitz.

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The American Committee on Maternal Welfare

Dr. Eva F. Dodge attended the meeting of the representatives of the constituent societies of the American Committee on Maternal Welfare, September 21, 1946, at the Drake Hotel, Chicago. Dr. Dodge was in Chicago to attend the meeting of the Central Association of Obstetricians and Gynecologists which was held the same week.

There was a discussion of plans for the third American Congress on Obstetrics and Gynecology, scheduled for September 8 to 12, 1947, at St. Louis, Missouri. The program will parallel the programs of the first two Congresses with papers and round-table discussions and demonstrations by leading specialists, nurses, public health officials and workers, medical educators, and hospital administrators. This is not a Congress for the specialists but for all who are interested in the improvement of the care of mothers and babies.

Individual membership in the American Committee for Maternal Welfare is open to any person interested in maternity care. The membership fee is five dollars and includes a year's subscription to *The Mother*, official organ of the Committee, and registration fee for the Congress.

Every physician interested in improving maternal morbidity and mortality will find the Congress of inestimable value. Attendance at the Congress is a "must" for these physicians. Hotel reservations should be made early as a large attendance is expected.

Dr. Pauline Martin of Pittsburgh is in Philadelphia taking a special course in psychiatry, her chosen field.

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Dr. Julia Ford Hill retired last summer from her work in the Pittsburgh Child Guidance Clinic, and is now in California, enjoying a well deserved rest.

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Dr. Martha M. Eliot, associate chief of the Children's Bureau, will become the first woman president of the American Public Health Association in its seventy-five years of history, following her appointment as president-elect at the recent convention in Cleveland. She will take office at the 1947 session in Atlantic City next fall, the newly installed president being Dr. Harry S. Mustard, director of the DeLamar Institute of Public Health at Columbia University. Dr. Eliot was vice chairman of the United States delegation at the world health conference in New York. She is a Fellow of the American Medical Association, the American Academy of Pediatrics, and the American Public Health Association. She is internationally known as a pioneer in the study and prevention of rickets.

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Dr. Helen S. Crawford, in a recent letter to Dr. Eva F. Dodge, writes: "You may be interested in knowing that I was Director of the Radiology Department of Indianapolis City Hospital from August 30, 1937, to May 1, 1944. I then came to Wausau, Wisconsin, in the same position at St. Mary's Hospital, and am still continuing the work there. They have installed all new equipment, including a 500 ma. diagnostic unit and the deep and superficial x-ray therapy units. The last two are all in cream color. On April 19, 1946, I married Harry F. Davis, 1301 Torney Avenue, who has been a resident of Wausau for over twenty years. I shall continue to use my name professionally."

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Dr. Vida Gordon has just been certified by the American Board of Pediatrics. Dr Gordon is the third pediatrician to be certified in Arkansas.

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In the *London Gazette* is an announcement that Dr. Barbara Stimson, M.B.E., New York City, has been appointed an Associate Officer of the Venerable Order of the Hospital of St. John of Jerusalem.

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Dr. Helen G. Walker and Dr. Jennie D. Klein announce the removal of their offices to 775 Main Street, Buffalo 5, New York.

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Our Cleveland correspondent sends us the following news: Dr. Ruth Robishaw, her husband, her mother, and her daughters, Elizabeth and Dianna, are making an extended flight through South America, going down the west coast and returning along the east coast. They are expecting to leave December 13, and return February 1, after covering about 20,000 miles. . . . Dr. Beulah Wells has just returned from a flight to Guatemala and after one day in Cleveland left for the meeting of the Pediatric Section in Pittsburgh. . . . Dr. Charlotte Kusta is leaving December 1, to spend several months in Florida. . . . Dr. Sarah Marcus and her husband, Dr. Cowan are expecting to make a trip to Guatemala and Mexico City in January. . . . Dr. Emilia Nitsch has recently opened her offiice at 19035 Detroit Road, Rocky River, for the practice of Pediatrics. . . . At the October meeting the Cleveland Women's Medical Society enjoyed The Armor Company Film on Hematology, which our Carroll Birch helped to make. . . . Dr. Grace Haskin, who returned after two and a half years' service in England and one year in the Navy at Bethesda, Maryland, hopes soon to open her office again in Cleveland.

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Dr. Mabel M. Akin and Mrs. C. E. Carlson were hostesses at a dinner on November 6, for the medical women of Portland, Oregon, at the home of Mrs. Carlson, N.E. 17th Avenue and Knott Street.

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Dr. Lulu M. Disosway, who formerly served at the St. Elizabeth's Hospital, Shanghai, China, is physician in charge of the Hudson Stuck Memorial Hospital, Fort Yukon, Alaska—a land of the mid-night sun in the summertime and the mid-day moon in the winter. Fort Yukon is an Indian village located above the Arctic Circle on the Yukon River where the temperature in winter drops to sixty degrees below zero.

NEWS FROM THE BRANCHES

Branch Two, Chicago

Program: January 8, 1947: Modern Anesthesia —Rose Engel, M.D. Discussion opened by Mary Carp, M.D.

Program: February 12, 1947: Clinical Uses of the Electrocardiograph—Anna Bohning, M.D. Discussion opened by Margaret Austin, M.D.

Both of these meetings will be held at the Cordon Club.

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Branch Four, New Jersey

The Fall Meeting of the New Jersey Women's Medical Association was held at the Essex House, Saturday, November 9, with Dr. Elizabeth Ward presiding. At the business meeting, held in the morning, the plans for entertaining the American Medical Women's Association in Atlantic City were discussed, and suggestions were welcomed. After lunch the scientific session was held. Dr. Selma Weiss, who is the Chief of Metabolic Service at Newark City Hospital, arranged a symposium on diabetes mellitus. In addition to Dr. Weiss, who spoke on diabetes in children, three other members of the Metabolic Service of the Newark City Hospital presented papers. Dr. Louis Grunt spoke on treatment of uncomplicated diabetes, Dr. Everett Bauman on coma, and Dr. William Nyiri on treatment of complications in diabetes. Dr. Benjamin Saslow, Chief of Metabolic Service at the Presbyterian Hospital, presented a paper on Insulin. There was a record attendance and a most enjoyable and instructive day was had by all present.

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Branch Twelve, Columbus, Ohio

Dr. Frances Harding, 433 E. Granville Road, Worthington, Ohio, is the new President of the Columbus Women's Medical Group, and Dr. Edna F. Patterson, 2483 E. Main St., Columbus, is the new Secretary.

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Branch Fifteen, Cleveland, Ohio

The Cleveland branch of the Women's Society had an Intern Program on November 13, 1946. The program included: Poliomyelitis by Mary Stratwell, M.D.; A Rare Complication of Pregnancy by Herta Spencer, M.D., Mt. Sinai Hospital; Typhus Fever by Mary L. Smith, M.D., City Hospital; Infectious Mononucleosis by Jane McCullough, M.D., City Hospital.

OBITUARIES

Dr. Deborah V. Dauber of Chicago, a graduate of Boston University Medical School in 1938, and a member of the staff of the Michael Reese Hospital, Chicago, died at that hospital on November 21, 1946, following an automobile accident. Dr. Dauber, who specialized in internal medicine, was a member of the Chicago Medical Society and of the Society for Experimental Biology and Medicine.

Dr. Mary W. Griscom of Philadephia, a graduate of the Woman's Medical College of Pennsylvania in 1891, died at her home after a short illness, on November 5, 1946, aged 80 years. Following her graduation Dr. Griscom studied in Vienna and Berlin, and on her return to this country became associated with Dr. Anna E. Broomall as associate professor of obstetrics at the Woman's Medical College. Later she was appointed chief in obstetrics at the Woman's Hospital, where she remained from 1903 until her resignation in 1913. Following her retirement, Dr. Griscom went to the Orient, and worked as a teacher and surgeon in China, Korea, and India, until 1922. She carried on relief work in Persia during 1919 and 1920, and in Austria during 1923 and 1924. After the first World War Dr. Griscom worked with the American Friends' Service Committee, taking charge of tuberculosis prevention and administering the funds collected in the United States for that purpose.

Dr. Elsie Reed Mitchell, who served with the American Women's Hospitals in the Caucasus in 1919 and 1920, died recently at her home in Berkeley, California, aged 75 years.

Dr. Helen B. Sasko-Molnar of Chicago, a graduate of the University of Illinois Medical College in 1903, died at her home on November 21, from a heart ailment with which she had been stricken shortly after her son, Captain Vladimir Sasko, U. S. Army, was lost over New Guinea in 1944. Dr. Sasko-Molnar had practiced at the Women and Children's Hospital and at the Southdown Hospital. She is survived by her husband, Dr. Martin P. Sasko, and one daughter.

ORGANIZATION

Official Reports and Announcements of the Association

Reservations for Annual Meeting

The A. M. A. will celebrate its One Hundredth Anniversary at the Atlantic City Convention, June 9 to 13, 1947. An unusually large attendance is expected and we therefore urge you to make your reservations early.

The Annual Meeting of the American Medical Women's Association will be held on June 7 and 8 (preceding the A. M. A.), at the Hotel Claridge. The procedure in making reservations is as follows: If you are planning to arrive before June 8 for the American Medical Women's Association meetings, write direct to the Hotel Claridge. If you are going to arrive June 8 or after, you must fill out the application blank for hotel accommodations found in the *Journal of the A. M. A.*, and mail as directed thereon.

In either case write *early* for your reservations. State definitely the dates of *arrival* and *departure*. Address Ada Taylor, Convention Manager, Hotel Claridge, Atlantic City, N. J.

There will be no reservations for single rooms. *Indicate the name of your roommate when making your application. This is important.*

—Carye Belle Henle, M.D.
Chairman of Arrangements

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New Members

Beginning this month, the JOURNAL will carry a monthly listing of new members of the Association. In order to bring the published list up to date, all names not heretofore printed in the Association's official organ are presented:

Drs. Erna K. Klass, Miami, Fla.; **M. Louise Benefield,** Long Beach, Calif.; **Dorothy Behner Holmes,** Washington, D. C.; **Dulcie Blunden-Morris,** Takoma Park, Md.; **Ida E. Fleming,** Cleveland, O.; **Anna R. Hendricksen,** Canton, O.

Drs. Helen E. Jones, Asbury Park, N. J.; **Paz Garcia King,** Chicago, Ill.; **Janet Kinney,** Chicago, Ill.; **Rebecca McConnell,** Pittsburgh, Pa.; **Helen McGregor,** Huntington Park, Calif.; **Helen M. Patton,** Chicago, Ill.

Drs. Sarah A. Pearl, Beverly Hills, Calif.; **Ethel Billie Powell,** Long Beach, Calif.; **Elmira E. Richli,** Poona, India; **Annemarie R. Rohan,** New Orleans, La.; **Margaret E. Scannell,** Chicago, Ill.; **Adele Simmons,** New Orleans, La.

Drs. Ruth Wells, Pasadena, Calif.; **Margaret Virginia Burns,** Decatur, Ga.; **Allie L. Canter,** Detroit, Mich.; **Lorraine Cloyes,** West Newbury, Mass.; **Henrietta Fruend,** Detroit, Mich.; **Rachel K. Gundry,** Baltimore, Md.

Drs. Pearl Huffman, Baltimore, Md.; **Grace E. Thomas,** Glendale, Calif.; **Rosa Prieto,** New Orleans, La.; **Jessie Cavener,** Little Rock, Ark.; **Lillian A. Walley,** Long Beach, Calif.; **Lydia M. Seebach,** Rochester, Minn.

Drs. Eloise W. Kailin, Washington, D. C.; **Lillie Cutler Walker,** Asheville, N. C.; **Martha Elizabeth Jenkins,** San Francisco, Calif.; **Joyce Perrin,** Des Moines, Iowa; **Martha Rosin,** Chicago, Ill.; **Helen Dimitrow,** Red Bank, N. J.

Drs. Eva M. Gaede, La Jolla, Calif.; **Grace Baker Goebel,** San Diego, Calif.; **Ethel Dronin Karst,** New Orleans, La.; **Margaret A. Maynard,** New Orleans, La.; **Cornelia Jane Gaskill,** New York, N. Y.; **Ruth Hughes Paul,** El Cajon, Calif.

Drs. Pauline Pevin, Detroit, Mich.; **Gladys Patric Shahovitch,** Los Angeles, Calif.; **Ruth M. Shushan,** New Orleans, La.; **Elizabeth A. Sirmay,** Los Angeles, Calif.; **Marie Stanberry,** New Orleans, La.; **Ethel Waters,** San Diego, Calif.

Drs. Elizabeth S. Waugh, Philadelphia, Pa.; **Marie H. Wittler,** Elmhurst, Ill.; **I. Elizabeth Fletcher,** Statesboro, Ga.; **Leila M. Kern Kamp,** Whittier, Calif.; **Bernice McCoy,** Whittier, Calif.; **Anna Neumann,** Washington, D. C.

Drs. Pearl Sylvia Pouppirt, San Francisco, Calif.; **Dorothy D. Prince,** Long Beach, Calif.; **Ann Peril Purdy,** San Francisco, Calif.; **Gladys Story Cunningham,** Chengtu, China; **Elise M. Rose,** San Francisco, Calif.; **Grace Talbott,** San Francisco, Calif.

Drs. Margaret N. Vickers, Wanakena, N. Y.; **Helen B. Weyrauch,** San Francisco, Calif.; **Rachel L. Ash,** San Francisco, Calif.; **Dorothy W. Atkinson,** San Francisco, Calif.; **Charlotte C. Baer,** San Francisco, Calif.; **Mabel Consuelo F. Bennett,** Berkeley, Calif.

Drs. Alice C. Bepler, San Francisco, Calif.; **Phillis Bourne,** San Francisco, Calif.; **Elizabeth Chabanoff,** San Francisco, Calif.; **Rubie M. Durgin,** Berkeley, Calif.; **Eva Farber,** New York, N. Y.; **Matilda Anne Feeley,** San Francisco, Calif.

(To be continued in February issue, along with retroactive list of life members.)

A NEW CONVENIENCE FOR THE PHYSICIAN ORTHO CONTRACEPTIVES IN COMPLETE SETS

Ortho-Gynol Vaginal Jelly—the most widely prescribed contraceptive preparation—is now available in a *complete set*, with Ortho diaphragm (sizes 55 to 95) and diaphragm introducer. Thus, when pregnancy is contraindicated, the physician may prescribe—*as one unit*—the complete requisites for effective, intelligent contraceptive practice...with full reliance on quality and patient-acceptance. For those who prefer the cream form—*Ortho-Creme* Vaginal Cream is also available in these handsomely packaged sets.

ORTHO PHARMACEUTICAL CORPORATION, LINDEN, N. J.

Ortho-Gynol
VAGINAL JELLY

Old Way...

CURING RICKETS in the CLEFT of an ASH TREE

FOR many centuries,—and apparently down to the present time, even in this country—ricketic children have been passed through a cleft ash tree to cure them of their rickets, and thenceforth a sympathetic relationship was supposed to exist between them and the tree.

Frazer* states that the ordinary mode of effecting the cure is to split a young ash sapling longitudinally for a few feet and pass the child, naked, either three times or three times three through the fissure at sunrise. In the West of England, it is said the passage must be "against the sun." As soon as the ceremony is performed, the tree is bound tightly up and the fissure plastered over with mud or clay. The belief is that just as the cleft in the tree will be healed, so the child's body will be healed, but that if the rift in the tree remains open, the deformity in the child will remain, too, and if the tree were to die, the death of the child would surely follow.

*Frazer, J. G.: The Golden Bough, vol. 1, New York, Macmillan & Co., 1922

It is ironical that the practice of attempting to cure rickets by holding the child in the cleft of an ash tree was associated with the rising of the sun, the light of which we now know is in itself one of Nature's specifics.

New Way...

Preventing and Curing Rickets *with* OLEUM PERCOMORPHUM

NOWADAYS, the physician has at his command, Mead's Oleum Percomorphum, a Council-Accepted vitamin D product which actually prevents and cures rickets, when given in proper dosage.

Like other specifics for other diseases, larger dosage may be required for extreme cases. It is safe to say that when used in the indicated dosage, Mead's Oleum Percomorphum is a specific in almost all cases of rickets, regardless of degree and duration. Mead's Oleum Percomorphum because of its high vitamins A and D content is also useful in deficiency conditions such as tetany, osteomalacia and xerophthalmia.

* * *

COUNCIL-ACCEPTED

Oleum Percomorphum With Other Fish-Liver Oils and Viosterol. Contains 60,000 vitamin A units and 8,500 vitamin D units per gram and is supplied in 10 c.c. and 50 c.c. bottles; and in bottles containing 50 and 250 capsules.

MEAD JOHNSON & COMPANY, Evansville, Indiana, U. S. A.

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